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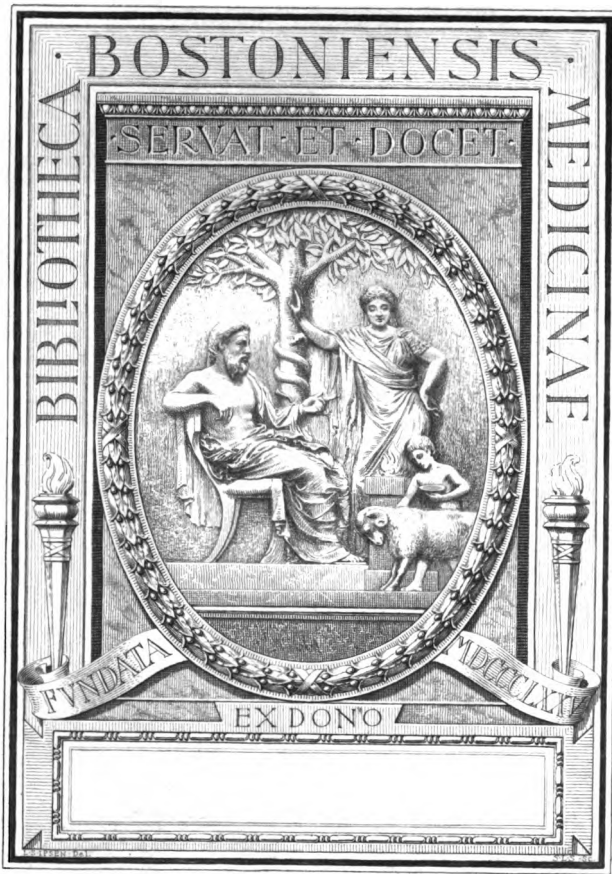
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*The Bristol  
medico-chirurgical journal*

Bristol Medico-Chirurgical Society













THE BRISTOL  
*Medico-Chirurgical Journal.*

A JOURNAL OF THE MEDICAL SCIENCES FOR THE  
WEST OF ENGLAND AND SOUTH WALES

PUBLISHED UNDER THE AUSPICES OF  
*THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.*

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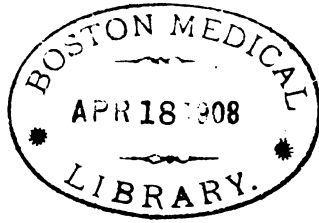
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Scire alius sciret."*

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VOL. XXV.

BRISTOL: J. W. ARROWSMITH.  
LONDON: J. & A. CHURCHILL, 7 GREAT MARLBOROUGH STREET.  
1907.



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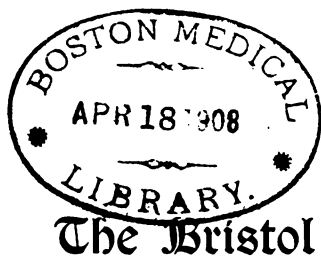
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# The Bristol Medico-Chirurgical Journal.

*"Scire est nescire, nisi id me  
Scire alius sciret."*

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MARCH, 1907.

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## PROGNOSIS.<sup>1</sup>

BY

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PROGNOSIS is one of the most ancient branches of medicine. In early times pathology, or the science of disease, did not exist, and treatment was for the most part ineffectual as well as superstitious. But the forecasting of events, when based upon prolonged experience, justly impresses both the educated and the vulgar. We see this in the case of the oldest of sciences—astronomy, based on observations and proved by the power of prediction of eclipses. One can imagine how those who had scoffed at a mortal being able to foretell the overshadowing of the sun or moon, and to foretell it on a definite day or night, must have been impressed by the beginning and completion of the shadow of the earth. The same holds with other branches of science: the cultivation of crops and of flowers, construction of piers and bridges, the

<sup>1</sup> An address given to the meeting of the Bristol Medico-Chirurgical Society on February 13th, 1907.



power of transmitting messages by the electric telegraph, and the still more marvellous achievement of wireless telegraphy. Incredible as these discoveries once were they are no longer so, even when the explanation of the how and the why is incomplete.

So when a child is attacked by the symptoms of pyrexia it is a wonderful thing that we can foretell the progress of the disease, its gradual evolution, and, when the crisis is passed, its gradual return to the conditions of health. Nothing is more solid as a foundation for rational medicine than the power we have of foretelling within tolerably narrow limits the course of such diseases as syphilis, variola, and enteric fever. No justification can be more complete, no demonstration stronger to every candid observer, than the accomplishment of a prediction of a disease.

The following are a few examples from the prognosis of the father of medicine :—

He taught that when delirium disappears after the patient has slept he is likely to recover. That it is a bad sign for the convalescent to regain his appetite without putting on flesh. In cases of jaundice, if the liver becomes hard to the touch the prognosis is grave. When spitting of blood is followed by expectoration of matter the prognosis is unfavourable. When an abscess is opened by the knife or the cautery, if pure white matter flows out the patient will do well, but if it be mixed with blood and is foul in odour he will probably not recover. In acute diseases prognostics either of death or recovery are more uncertain than in those of a chronic course.

During the long retrogression which followed the Hippocratic era, when Galen taught anatomy on monkeys and hogs, and treatment was empirical and usually inefficient, the shrewdness and unbiased observations of the best physicians enabled them to form a prognosis, sometimes with remarkable success.

Again, next to immediate relief of pain there is no question so paramount with the patient himself as that of the event. What is it? generally means, What will it do to me? A favourable prognosis when given with authority is often more important than any method of treatment, and while we must never give patients hopes which cannot be fulfilled, we must preserve the

priceless benefit of that determination to get well, of that interest in one's own case, which is one of the chief aids to recovery. The mere statement of the name of some obscure condition, and still more the prediction of recovery, however guarded as being probable rather than certain, will often ensure sleep in a despondent patient, and will rouse the effort which is needful for recovery.

The diseases of *children* afford very interesting examples of prognosis. In early childhood the patient can give us little or no account of his condition, and we have to depend entirely upon our own observation. Nothing, therefore, is better exercise for beginners than to investigate one of the exanthems or a severe injury in a little child. If they cannot help us by information they at least cannot set us on the wrong track (as adults frequently do), sometimes by wilful deception, but more often by the incurable mixing-up of facts and inferences and the obstinate refusal to tell us what no one else can—the patient's own feeling, and not a mixture of information from others, in supposed agreement with the theory of medicine.

In early life the processes of disease are very rapid, and a child may speedily be brought from the condition of blooming health to that of grave sickness, or even of imminent danger. But although this is true, particularly of diarrhoea and laryngitis, it is also true that children have a great power of resistance to a malady, so that his recuperative power not infrequently carries a child safely through extreme peril. Anatomical conditions of the child's body render the prognosis of invagination and laryngeal diphtheria peculiarly fatal; but diphtheria in children has been happily robbed of its terrors by the scientific treatment that has enabled us to meet the case with hope, and usually with success, which in patients under three years old was almost certain to end fatally.

When we deal with a disease of known pathology prognosis is comparatively easy. Cancer and hydrophobia, glanders and leprosy are soon recognised, and their diagnosis involves the gravity of the forecast. As soon as we have made the diagnosis of modified variola or of enteric fever we can predict the course of the disease and the order of its symptoms. When we have

decided that a supposed scarlatina rash is a local erythema, or a scaly patch on the scalp is not ringworm, the prognosis carries with it the means of cure. Some of our elements of prognosis depend on the patient himself rather than on the disease. Certain symptoms, like hyperpyrexia, subsultus tendinum, or convulsions at once suggest a grave prognosis ; while, on the other hand, to see a patient's appetite returning, to observe his lying on his side instead of on his back, the diminished temperature and less frequent pulse, a recovery of strength and volume in the voice, are signs of improvement which we all recognise as guiding our prognosis.

Although their frame is fragile, we must all of us have been struck by the power of resistance of children in spite of loss of flesh, how they will rally after extreme emaciation or continued convulsions, or prolonged bronchitis. Even the worst forms of eczema are very seldom fatal. Children will struggle through rickets and will surmount the successive invasions of whooping-cough and bronchitis, of measles and diphtheria, scarlet fever and nephritis. Never give up a child till he is screwed down.

With older children, after the first dentition and until puberty is attained, the prognosis is much more favourable than in young children, and even in adults. Children between two and twelve are still subject to acute and severe illness, and may rapidly pass in a few hours from apparent health to imminent danger, but, compared with infants, their circulation is more stable, their vigour in breathing and coughing is much greater, and their power of maintaining temperature more perfect.

The older the patient attacked by diphtheria or scarlatina or ringworm the better is the prognosis. In one well-marked and severe disease—lobar pneumonia<sup>1</sup>—we must all have been struck by the wonderful power of recovery shown by children of between three and fifteen. We may say that death from uncomplicated acute pneumonia at this age is almost unknown. The same is true of enteric fever, the mildest forms of which are characteristic of this early age.

In this period, however, the prognosis of phthisis is very grave,

<sup>1</sup> Not "croupous pneumonia."

and it is often complicated by general disseminated tubercle. Scarletina is more severe in these young subjects than in adult life, while measles is less so, and rubella is less severe and more safe at an older age.

There remains one of the most striking differences between the prognosis of a child and an adult—I mean *diabetes*. Happily rare in children and young adults, its danger is almost exactly measured by the age of the patient. The rare cases which occur in infants are probably always fatal, and the symptoms are very acute. In young adults it is still a very grave and menacing disease, and it is not till after forty that the cases become milder, less sudden in onset, and less severe in their symptoms, while, as we all know, diabetes in patients of advanced years is sometimes so mild that it is scarcely more than a bearable infirmity.

The period from twenty-five to fifty is probably on the whole the most favourable for diseases, acute or chronic. Cases of unvaccinated small-pox, if they recover at all, belong to early life, ten to twenty. During the period of forty to sixty, cases of phthisis are generally more chronic and more amenable to treatment than before. The muscular powers and the vigour of the heart, the respiration, and the brain are in most persons still at their best. When those who have attained an older period of life may still show remarkable mental ability, their enduring power is in almost all cases much diminished. The old man who would guard his laurels must speak but seldom. On the other hand, old people are less plagued with the sick headaches, indigestion, and eczema of early life. They are more liable to cancer, particularly of the stomach and rectum, but, according to the experience of most of us, less so to sarcoma. As old age advances, it is remarkable how many men and women retain considerable powers of endurance. Many old men bear short sleep and diminished rations better than they did in the prime of life, and are sometimes less fatigued than those twenty years younger by a day's shooting on a warm September day or a night in a railway carriage. Specific fevers are very fatal in old age. At the same time acute pneumonia, though never the almost innocuous disease of youth, is far from always fatal. I imagine the not infrequent cases I

have seen of men and women of sixty-five, or even seventy, who recovered from pneumonia, must be explained by their being picked lives, that is to say, that they have surmounted so many assaults in their long life that they are no longer ready to surrender at the first summons. Cancer is, as we all know, not infrequent in even the oldest, but it is in them that it is most often discovered for the first time after death. Very chronic cases of cardiac disease or Bright's disease are common in old age, but their symptoms are less severe than in younger patients.<sup>1</sup> In advanced old age, apart from these almost latent organic lesions, the chief mortality, like that of young children, is due to bronchitis or diarrhœa. Cerebral hemorrhage, though common in old age, is less so than at sixty; but we must remember in these, as in other cases, there are fewer persons living over seventy to furnish large numbers of any disease. In old people arterial disease is almost part of their natural condition, and probably there are few over fifty but have some loss of elasticity of their arterial coats. Hence the frequency of death in the aged, either from rupture of arteries in the brain or, still more suddenly, from syncope of the heart.

Lastly, I would urge the conviction that old age is not in itself a cause of death at all, however readily returns are made to the Registrar-General. I do not remember seeing a *post-mortem* examination in which there was not present degenerated blood-vessels, or renal disease, bronchitis, or diarrhœa, latent cancer, or some other obvious anatomical lesion.

Here let me urge the importance of drawing up the certificate of death either in accordance with an autopsy, or, when this cannot be obtained, in accordance with the symptoms during life. Apoplexy is a condition we can all recognise, and death from that cause is scientifically certain. But if we return "cerebral hemorrhage" as the cause of death, we are putting a probable conclusion only, and the result is that common diseases are made more common and rare diseases more rare than they truly are. Again and again I have seen such causes of death as anterior poliomyelitis, cancer of the pancreas, or tumour of the lung reported

<sup>1</sup> Mental and moral mellowing of old age—

"The soul's dark cottage, battered and decayed,  
Lets in new light thro' chinks that time has made."

without any anatomical evidence. "Congestion" of the lungs or liver or other organs is another source of false facts. If active, the hyperæmia is only part of a local inflammation; if passive, it is due to some other primary cause. No doubt the double return asked for invites such secondary causes of death, but we are not obliged to make the double return, and a statement that a patient died of pneumonia, of phthisis, of renal dropsy, or of cancer of the liver is less, not more, valuable if bronchitis or pleurisy are added, or if we return cancer of the stomach instead of cancer of the liver, because we know that with few exceptions hepatic cancer is secondary to that of the stomach or bowels.

The difference between the sexes in the incidence of disease is much less than the difference of age. More girls than boys are subjects of chorea and whooping-cough. The exantheams affect both sexes equally. The frequency of scarlatina as a complication of delivery has long been recognised.

Speaking generally, better prognosis may be given in cases of serious disease when the patient is a woman than when a man. This applies strongly to gastric ulcer, and not to duodenal; also to valvular disease of the heart and to anæmia, but it certainly does not apply to phthisis.

In the large group of nervous affections we may, as a rule, give a better prognosis in the case of women. They more often recover from what has the appearance and many of the symptoms of organic disease: a cerebral hemorrhage, a tumour of the brain, acute myelitis or sclerosis of the spinal cord.

An important point in forming a prognosis is the different gravity of an acute attack occurring in a healthy organism and in a patient already suffering from chronic disease. Acute pneumonia, acute bronchitis, and infective fevers are all more grave in the case of patients already suffering from chronic disorders; and we may affirm that this is particularly true of diseases of the kidneys, the heart, and the lungs. The presence of Bright's disease is an important element in prognosis, not only when complicated by a new disorder, but when tried by injuries, including surgical operations, and by drugs like opium and mercury. Cardiac disease increases the mortality of bronchitis, of pulmonary

catarrh (so-called "lobular pneumonia"), and acute lobar pneumonia. The presence of chronic phthisis and emphysema is most important in cases of acute bronchitis, whereas I have seen patients even at an advanced stage of phthisis go favourably through an attack of scarlatina, enterica, and acute rheumatism. Phthisis scarcely increases the danger of valvular disease. On the contrary, when cardiac incompetence is established it often appears to check the progress of consumption.

The presence of *glycosuria* has a marked deleterious effect on the prognosis of injuries or surgical operations, and also upon cases of acute pneumonia.

*Anæmia* differs so much in its causes and pathology that it is difficult to speak of its influence on prognosis generally. We may say that anæmia caused by direct hemorrhage, by injury or rupture of a blood-vessel, is less serious than when pallor appears during convalescence from fever or rheumatism, or when caused by privation or by deficiency of light and air.

The influence of *malaria* as an element of prognosis, like that of syphilis, has probably been overrated. It is very doubtful if *syphilis* is responsible for anything but its own direct effects; but we must include among the later effects of lues the chronic nervous degenerations of the nervous centres which have long been clinically recognised as general paralysis and tabes.

Another disease to which some writers attribute, I think, far too extensive an influence, is *gout*, particularly when the demonstrable anatomical effects are supplemented by various other symptoms which lead to drinking weak mineral waters and travelling to distant and expensive baths.

Prognosis of *enteric fever* depends, first, upon the age of the patient. In children it is as a rule a recoverable disease. I once saw a little boy pass through a severe attack in which there was every evidence of perforation of the bowel except seeing it, and he went out as healthy and much fatter than any boy of his age I have seen.

*Pneumonia*, like others of the group, is more favourable when primary, and less so when secondary to other diseases.

Many authorities, especially abroad, teach that *syphilis*, once

acquired, is never got rid of, but therein I cannot agree. That it is a disease which often continues and relapses after apparent cure is a matter of common experience, but there are numerous cases in which all symptoms disappeared, the colour again became that of health, and the nourishment of the body as good as ever.

The prognosis of *phthisis* used to be considered almost hopeless, but at present it is generally recognised that the disease is curable. For proof of this we have only to frequent the dead-house of any large hospital to find in patients who have died from accidental injury, or some entirely different disease, unmistakable evidence of old *phthisis* in thickening and adhesions and contractions, so that the clinical course of the disease is confirmed by the results of *post-mortem* anatomy. We must all have seen such cases in practice, and noticed those who undoubtedly were affected in youth, living in health for many years, and dying at last from some other malady. This result is, however, far from constant. I have again and again observed that a patient who showed signs of tuberculosis in early adult life, after recovering and living for many years in health, may again develop symptoms of the disease of his youth. Two patients I have had for many years under observation in whom this result followed, and I am inclined to believe that the majority of cases called senile *phthisis* are really a recrudescence of a disease which was cured in early adult life.

*The prognosis of cardiac disease.*—In the early days of physical diagnosis it seems to have been thought by some of the leading physicians of the day that the presence of a murmur indicated incurable disease, and with the oracular solemnity of happily past times, an eminent physician, after listening to a patient's heart, said, "I am sorry to tell you, sir, that with the aid of this stethoscope I have heard your death-knell." Now valvular disease of the heart, regarded anatomically, is no doubt incurable, yet consequent changes in the muscular walls of the heart are sufficient to counteract the mischief done and to restore the hydraulic equilibrium of the blood. We hear such a process spoken of as an "effort of Nature" to deal with the



disease. This is surely an inaccurate conception. There is no such thing as conscious, or intelligent modification adapted to cure a disease. The "effort of Nature" in causing contraction of a serous surface sometimes remedies a dangerous lesion, but as often these same adhesions may cause fatal strangulation. The only healing power is the fact that any natural process, when not too violently disturbed, tends to return to its previous state of rest. The very processes which lead to a defence of the organism in one case will lead to its destruction in another. Even the phagocytes, which form such useful protection for an organism, certainly are not acquainted with the object of their life.

Passing now to the prognosis of *Bright's disease*, we may notice that an improved estimate of a patient's chances has replaced, as in the case of phthisis and of cardiac disease, the early estimates of its hopeless nature. The discoveries of Laennec, Corrigan, and Stokes, like those of Bright, were regarded as pathologically interesting, but as affording little room for treatment. Acute nephritis is sometimes, indeed, so rapid and severe—particularly in children—that bleeding, purging, and hot baths are powerless to avert the fatal event; but these cases are rare, and the ordinary forms of tubal nephritis are subacute in time and severity, and admit of ample time for treatment. In the advanced stages of the granular kidney treatment is much less efficacious; but even then it is astonishing how often a chronic case may be broken by gleams of hope, and the final cause of death be due, not to uræmia, but to cerebral hemorrhage.

In cases of ordinary cirrhosis of the liver, the organ is usually in a state like that of the corresponding disease of the kidneys, which depends upon a long course of toxic processes begun long before they come under notice. Quite apart from their direct effects, they probably cause still more numerous deaths when they act in greatly aggravating the prognosis of pneumonia or other acute attack.

Tuberculous meningitis is, with reason, regarded as of the worst possible prognosis, but I have seen it recover under the

influence of mercury in cases which seemed as certain in their diagnosis as was possible without an autopsy.

Of the wonderful success in modern times of surgery in diseases of the brain we are all proud, and all the more because treatment is the result, not of chance good luck, but of carefully-reasoned scientific facts, acquired in the only way that facts in pathology can be discovered—by experiment on the lower animals. The diagnosis of a tumour of the brain, its accurate localisation and successful removal form, perhaps, the most brilliant example of surgery at its best which the past century offered.

I remember an observation which the late Mr. Stocker, the apothecary of Guy's Hospital in my student days, "obscurely wise and roughly kind," used to make in going round the wards to see urgent cases after the physician had gone home. "If," said he, "when you come with a candle to his bedside the patient lies indifferent when you pull down the clothes and examine the abdomen, that's fever; but if he pulls them up again and turns over on his side, and swears at you for disturbing him, that's brain."

The prognosis was often as sound as the diagnosis, but I am afraid in this, as in so many other matters, "the hits"—to use Bacon's simile—"are apt to be counted and the misses left out." The best prognosis, like the best diagnosis, rests on the foundation of observation and experience.

Of *gout and of rheumatism* it may be said that the arthritis they have in common seldom, if ever, leads to a fatal result. It is the rheumatic pyrexia which kills a patient with all the characters of a specific fever. On the other hand, gout has no such affinities, but proves fatal indirectly by setting up disease of the kidneys and the arteries. What our predecessors meant by gout in the stomach we do not know. We merely recognise it as an acute attack of flatulent dyspepsia, which can usually be cured by soda and ether with other anti-spasmodics. I have observed that the prognosis of rheumatic fever (provided that the heart escapes) is comparatively unaffected by anything but hyperpyrexia, and the joints seldom, and only after usually frequently-repeated attacks, become deformed.

*Osteoarthritis*, most unluckily still called rheumatic gout, though so distressing a crippling disease, has no internal allies, and is compatible with prolonged health for many years.

A fourth articular disease, also confused with gout and rheumatism, is gonorrhœal synovitis, remarkable by its origin, its distribution, and its relation to the eye, where it sometimes produces a subacute scleratitis—quite distinct from infective iritis, due to actual contact with the streptococci of a primary focus—a true gonorrhœal ophthalmia. The prognosis of this rather uncommon affection is that it never attacks the heart; that though often obstinate and prolonged, it never returns when once got rid of, unless a fresh attack of gonorrhœa occurs, and then it almost always recurs, as bad as before.

The prognosis of what used to be called *typhlitis* or *perityphlitis* has changed remarkably in our lifetime. When described by Addison in 1850, it was generally cured by starvation or milk diet, opium, and local anodynes. The fatal cases were very rare. Now the same disease—for it must be the same—is often ushered in with great rapidity, and, unless early dealt with by the surgeon, is apt to lead to death. While admitting the frequency of such severe and rapid cases, I cannot throw away the experience of earlier days when typhlitis was a comparatively frequent disease, usually cured without operation, and only so treated when unusually severe or when the presence of pus was early recognised.

The prognosis of renal disease varies with age and circumstances. In children it is happily rare, though far from innocent. But in adults it is more manageable, and in old age a certain amount of albuminuria is compatible with comfort, and seldom ends in the rapid and profound coma seen in younger cases.

The prognosis of diabetes is better known now than it was in the days of Prout. In those under adult age it is rapidly and almost constantly fatal by coma. In early adult life it is a still dangerous disease. In old age it is comparatively free from danger.

Rational prognosis is the result of experience in cases, at the bedside and in the dead-house. If every organ could be the

seat of every kind of disorder we should never come to a conclusion ; but we know that each organ has its own more or less restricted pathology, and therefore the path of accurate diagnosis and successful prognosis lies through the dead-house. On its portals might well be inscribed the sentence of our great master, Harvey : “ Ad viliorum animalium inspectionem . . . accedite ; nam neque Dii desunt immortales maximusque omnipotens Pater in minimis.”

May I conclude, as I began, with a few aphorisms of prognosis ?

Acute diseases following on chronic are the most dangerous.

A degree of pyrexia, which is unimportant in a child, is serious in an adult.

Typhus is most dangerous in the case of elderly patients and infants ; less so in young adults.

The most severe forms of scarlatina occur in children ; but whooping-cough is dangerous only in young children.

Pneumonia is benign, as a rule, in children and young adults, and is fatal in drunkards.

Acute primary pleurisy is only dangerous when the pericardium is also affected ; but the pleurisy secondary to tubercle, or to cancer, or to Bright's disease is usually fatal.

Œdema of the glottis is seldom the cause of death ; œdema of the lungs is often so.

“ Capillary bronchitis ” is in most cases lobular catarrh.

Hæmoptysis is seldom fatal by flooding the lungs. If it is, the cause is probably a small aneurysm of the pulmonary artery.

Hæmatemesis is seldom directly fatal. Valvular lesions appear to check rather than aggravate the progress of phthisis.

Sudden death is more often due to aortic incompetence than to aortic obstruction, and more often due to mitral obstruction than regurgitation.

Apoplexy, which is ingravescent, is almost always fatal.

Malignant growths are most rapidly fatal in children and young adults. In old age they spread slowly, and sometimes undergo more or less complete wasting.

# CEREBRO-SPINAL FEVER (EPIDEMIC CEREBRO-SPINAL MENINGITIS).

BY

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AND

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THE invasion of New York by cerebro-spinal fever in the winter and spring of 1904-5, when some 4,000 cases occurred,<sup>1</sup> and the more recent appearance of the disease in Glasgow (March, 1906), in Belfast, and some other districts, invite attention to its causation and prophylaxis.

It is generally recognised that a cerebro-spinal meningitis may be set up by various causes, such as disease of the middle ear, pneumococcal, tubercular, or streptococcal infection, or as a sequel to certain of the exanthemata ; but during the last years, the form (cerebro-spinal fever) which exhibits marked though erratic infective properties under predisposing conditions at present ill-understood, has been found to be definitely associated with the organism of Weichselbaum, the diplococcus meningitidis intracellularis.

The *history* of the disease<sup>2</sup> is not without interest. Its occurrence is veiled before the nineteenth century, but in 1804-5 Vieusseaux, of Geneva, distinctly described it. In the following year it appeared in America (Massachusetts), and the United States have hardly been free from it since ; it became widely spread during the Civil War. In Canada the outbreaks have been small, probably owing to the scattered population. In

<sup>1</sup> Flexner, *Brit. M. J.*, 1906, ii. 1023.

<sup>2</sup> Bruce Low, *Tr. Epidem. Soc. Lond.*, 1898-9, n.s., xviii. 53.

India it has been prevalent from time to time in the jails. Europe has never been quite free since the Geneva outbreak, in turn it spread to France, Italy and Denmark, and afterwards to nearly every European country. In France it was noticed that the outbreaks largely affected troops in garrison. A widespread outbreak occurred in Dantzic in 1865-6, when 1,900 were attacked, chiefly children.

The disease was first noted in Ireland in 1845-6, when it affected the Irish Constabulary and the workhouses at Dublin, Bray, and Belfast; again in 1866 it prevailed in the Dublin barracks and in the Curragh; in 1885-6-7 it again became epidemic in Ireland. In the first six months of 1900 there was an outbreak in Cork<sup>1</sup> involving 100 cases and 25 deaths.

In Scotland it has been shown that, though not generally recognised, the disease occurred from time to time in small outbreaks between 1877 and 1886.

In England and Wales also various groups of cases have from time to time been reported, but its nature appears to have not infrequently escaped recognition; it is probably not so rare as is generally supposed, and since 1890 there has apparently been a general tendency to ascribe obscure outbreaks to influenza.

*Local History.*—No widespread outbreak has been recorded in the Bristol district, but Stack<sup>2</sup> has recorded an interesting group of six cases received into the Royal Infirmary in 1900-1, in five of which the diagnosis was confirmed by lumbar puncture and recognition of the diplococcus intracellularis: the sixth case occurred in the same house as, and was the daughter of, a fatal case. He sums up the most constant conditions as: (1) An irregular temperature not assignable to other causes; (2) pain in the back of the head and neck; (3) general hyperæsthesia; (4) herpes labialis; (5) Kernig's sign (inability to extend the leg on the thigh when the thigh is at right angles to body); (6) discovery of specific diplococcus.

The following table, for which we are indebted to Dr. A. Rendle Short, gives a résumé of cases which have been treated in the Bristol Royal Infirmary since 1901:—

<sup>1</sup> *Brit. M. J.*, 1907, i. 461.

<sup>2</sup> *Bristol M.-Chir. J.*, 1901, xix. 44.

| DATE OF<br>ADMISSION. | SEX. | AGE. | SYMPTOMS, ETC.   | RESULT. | ORGANISMS.                           | REMARKS.                                    |
|-----------------------|------|------|--|---------|--------------------------------------|---|
| 8.2.02                | F    | 22   | Headache, optic neuritis,<br>vomiting, squint, no fever        | Cure..  | —                                    | Perhaps not<br>proven                       |
| 2.6.02                | F    | 14   | Headache, coma, hazy<br>discs, herpes, no fever                | Cure..  | —                                    | Doubtful                                    |
| 27.4.03               | M    | 37   | Coma, fever, delirium ..                                       | Death   | M. meningi-<br>dis (in nose<br>also) | —   |
| 5.3.04                | M    | 15   | Fever, delirium, headache<br>retraction, herpes, hazy<br>discs | Cure..  | M.<br>meningitidis                   | —   |
| 26.5.04               | M    | 15   | Fever, headache, herpes,<br>Kernig's sign                      | Death   | M.<br>meningitidis                   | —   |
| 18.9.05               | M    | 6/12 | Posterior basic meningitis,<br>with retraction                 | Death   | —                                    | Undoubtedly<br>a form of C.S.<br>meningitis |
| 31.12.05              | M    | 33   | Headache, fever, coma,<br>retraction                           | Death   | —                                    | Proved at<br>autopsy                        |
| 2.3.06                | F    | 10   | Proptosis, sphenoidal<br>sinusitis, basic meningitis           | Death   | M.<br>meningitidis                   | —   |
| 22.2.06               | M    | 3/12 | Posterior basic meningitis<br>with retraction                  | Death   | Diplococci<br>and staphy-<br>lococci | —   |

*Infectivity.*—The recorded facts in regard to cerebro-spinal fever are not so contradictory as they at first appear to be, and there is little doubt that the chief incidence of the disease is upon childhood, or upon young adult life,<sup>1</sup> and that in close communities, such as barracks or institutions, the disease is certainly, though apparently not very readily, communicable.

The seemingly sporadic habit of the disease, when introduced under conditions of less intimate association, as into a village, may be explained by the habits of the organism, which when grown artificially is readily attenuated, and may thus, if similar attenuation attend its natural distribution amongst individuals of varying resistance, give rise to ill-marked cases, or to "carrier" cases, by which the infection is preserved and handed on, exactly as in the case of diphtheria. Extensive investigations by Osterman showed that the meningococcus was present in the nasal cavities of 74 per cent. of the people who had been in the neighbourhood of the patients. Jehle points out that miners form specially good carriers, as the organism thrives best apart from light, and in a warm, moist atmosphere.

<sup>1</sup> Hirsch points out that the age limit in most epidemics is from 1 to 15, but in "military" epidemics the most vulnerable ages are from 18 to 24. —*Geographical and Historical Pathology*, vol. iii., New Sydenham Soc., 1886

It must not be forgotten that animals may also act as carriers. In the 1872 New York outbreak, and in the 1866 Irish outbreak, horses and pigs suffered badly from cerebro-spinal fever. Rabbits, mice and guinea-pigs are almost insusceptible to the action of the meningococcus.

The limits of an outbreak may, therefore, not necessarily be defined by the known cases, and, equally, the fatality of outbreaks is probably, as a rule, overstated.

This points to the need for early notification, before the specific organism has become "domesticated" in a district, so that confirmation of diagnosis by lumbar puncture and bacteriological examination may further the application of prompt preventive measures to the initial cases.

Farrar<sup>1</sup> insists with much cogency upon the infectivity of the disease, and adduces instances pointing to the conveyance of the infection by "fomites," by aerial infection during expectoration and sneezing, by kissing, and by the mediate agency of contacts. Its "limited" infectivity is, at the same time, indicated by its sometime presence in barracks without concurrent prevalence in the civil population, and by the converse condition.

The epidemiological facts point to the persistence of the organism with high potentiality of infection for long periods, followed by an explosive intensity upon occasion, as manifested in fatal "house-epidemics;" this activity is rapidly exhausted, and these localised outbreaks, intensely virulent within a narrow range, do not, as a rule, spread very far. In explanation of its explosive epidemic virulence, he hazards the suggestion of a symbiosis of the meningococcus with some other organism, such as the micrococcus catarrhalis, or Pfeiffer's bacillus.

*Prophylaxis.*—Two classes of people must be considered, namely the "infected" and the "infective." It is apparently necessary that the buccal and nasal cavities of possible "carriers" should be washed out night and morning with a good stream of warm dilute antiseptic solution, and swabs should be taken and submitted for bacteriological examination at regular intervals.

<sup>1</sup> Farrar, "The Infectivity of Cerebro-spinal Fever," *Tr. Epidem. Soc. Lond.*, 1905-6, n.s., vol. xxv. 245.



“Contacts” should be isolated and similarly treated.

As to the patient himself, effective isolation is very advisable. His nasal and buccal cavities and hands should be kept continuously clean. All the utensils he touches should be immediately disinfected. Handkerchiefs, towels, linen, bedclothes should be dipped at once after use into disinfectant solution. The room which the patient has occupied should be thoroughly disinfected.

Mervyn Gordon recommends medical “Izal” for the purpose of buccal and nasal disinfection, and places potassium permanganate equal to mercury bichloride or silver nitrate. Almost any disinfectant will serve the purpose, provided it is used sufficiently strong.

Jehle employs pyozyanase, a proteolytic ferment. The introduction of five drops of this ferment serves to effectually kill the organism when present in the nasal fossæ.

*Diagnosis.*—Lumbar puncture should always be made in indefinite cases of meningitis. The skin should be specially well cleansed, and a needle with a small bore employed. The fluid should be received into a sterile tube, the tube at once plugged with sterile wool, and transmitted for chemical, cytological, and bacteriological examination. The characters of the cells afford useful information, and the coccus itself can be isolated within a few days.

The agglutination reaction is also of value. It may be produced by a sample of blood withdrawn from the patient on the sixth day and onwards.

The *general features* of the disease are thus described in the memorandum of the Local Government Board, issued in 1905:—

“An acute epidemic disease, characterised by profound disturbance of the cerebral nervous system, indicated at the outset chiefly by shivering, intense headache or vertigo, or both, and persistent vomiting; subsequently by delirium, often violent, alternating with somnolence or a shade of apathy or stupor; an acutely painful condition, with spasm—sometimes tetanoid—of certain groups of muscles, especially the posterior muscles of the neck, occasioning retraction of the head, and an increased sensitiveness of the surface of the body. Throughout the disease

there is marked depression of the vital powers, not infrequently collapse, and in its course an eruption of vesicles, petechiæ, or purpuric spots, or mottling of the skin is apt to occur. If the disease tends to recovery, the symptoms gradually subside without any critical phenomena, and convalescence is protracted; if to a fatal termination, death is almost invariably preceded by coma."

Various forms are described, viz. :—

1. The fulminant form, attacking suddenly and killing quickly.
2. The simple form, having typical nervous symptoms.
3. The purpuric form, attended by hemorrhages.
4. The abortive form, with anomalous symptoms, running a short or irregular course.

A specific coccal pharyngitis or tonsillitis is a frequent early symptom.

The *predisposing causes* upon which chief importance has been placed are cold, dampness of soil, fatigue, and, in general, depressing influences; also the influence of insanitary conditions, especially such as generally accompany overcrowding.

*Treatment.*—In addition to the older remedies, withdrawal of fluid by lumbar puncture and the frequent use of hot baths are now generally advised. The proposed injection of 1 per cent. lysol into the spinal canal has not met with general application. Injections of mercurial cyanate and collargolsalbe may be placed in a similar category. Westenhœffer suggests incision of the atlanto-occipital ligament during the second week of the attack. This provides permanent drainage, prevents hydrocephalus, and permits of local applications being made.

*Serum Treatment.*—Many attempts have been made to obtain a curative serum. The earlier sera of Bonhoff, Lepierre, and Lingelsheim, obtained after injection of the dead and living cocci, had only slight protective effects. A similar result followed the earlier use of aggressin. The names of Wasserman, Kolle, Bruck, Bordet and Gengon, Mareschi, Neisser and Sachs, indicate the amount of work and the eminence of the workers upon this subject. The endeavour was next made to estimate the quantity.

and specificity of the immune bodies in the anti-serum. Inactivated specific serum—meningococcal serum—was placed in a test-tube, together with an extract from the cocci themselves, and with some normal guinea-pig serum, and kept at 56° C. for about half an hour. The amboceptors of the anti-serum, the receptors of the bacillary extract, and the complements of the fresh serum were brought thus together. The addition of an inactive hæmolytic system (serum and blood corpuscles) was now made in order to avoid ultimate hæmolytic action. After two hours in the incubator, and twenty-four hours on ice, specific amboceptors appear and anchor the complement. In this way the specificity and quantity of the amboceptors has been determined.

Five to ten c.c. of this serum are injected subcutaneously, and the injection is repeated once or twice on the following or alternate days.

Jochmann prepares a serum which is injected intra-spinally in quantities of 20–30 c.c., after removal of 20–50 c.c. of the spinal fluid by lumbar puncture. In this connection it may be cited that lumbar puncture itself, by the withdrawal of toxins and meningococci, is often followed by surprisingly good results.

The condition appears to be very favourably influenced by the use of the serum, but it is as yet too early to quote any definite statistics.

It is possible that “vaccine” treatment may play a useful part in later outbreaks.

*Pathological Anatomy.*—The main features consist of a thick, purulent, creamy exudate covering the base, and sometimes the cortex, of the brain. The Sylvian fissure is generally free from exudate, but the upper surface of the cerebellum is the seat of much exudate. These points are useful from a diagnostic standpoint. In long-standing cases the meninges are fibrous, and cerebral atrophy and serous, or purulent, internal hydrocephalus are frequent. The cord shows similar conditions.

In addition, meningo-encephalitis often occurs, the glandular organs generally show cloudy swelling, the spleen is enlarged, there is often purulent bronchitis and lobular pneumonia, pleurisy

and pericarditis and joint troubles are not infrequent, and catarrh and punctiform hemorrhages are present throughout the alimentary tract, while the mesenteric glands are almost always enlarged.

The meningococcus can be obtained from either the nasal cavity or the pharynx. The organism appears to extend to the meninges by the lymphatics, although it is not possible to entirely exclude hæmatogenous paths of infection.

There are many gaps in our knowledge of this disease, and every case is worthy of minute and careful observation and record.

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## OPERATIONS FOR DEFLECTIONS AND SPURS OF THE NASAL SEPTUM, WITH SPECIAL REFERENCE TO SUB-MUCOUS RESECTION.

BY

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THE nasal septum is formed by the triangular cartilage, the perpendicular plate of the ethmoid, and the vomer, and is, therefore, divisible into the cartilaginous and the bony septum. These structures forming the septum may become fractured, dislocated, or deflected according to the nature of the injury or other primary cause of deformity. The cartilaginous septum is the most liable to dislocation or fracture, and most readily yields when subject to other causes of deflection mentioned below, and thus is most frequently the seat of defects requiring interference.

Deformities of the septum are very variable in shape, and it is convenient for clinical purposes to recognise three chief varieties. Deviations or deflections which are (1) C-shaped, as the septum may be bowed towards one side or the other, in an antero-posterior direction or in a vertical plane. (2) S-shaped

where the bowing is in one direction anteriorly or below, and in the opposite direction posteriorly or above. These C- and S-shaped deflections are frequently due to or associated with dislocations of the cartilage from the vomer, and are frequently combined with the next class of ridges or thickenings along the line of such dislocation. (3) Outgrowths, spurs, crests, or spines. These are usually seen along the line of articulation of the triangular cartilage with the vomer, and may or may not be accompanied with actual dislocation of the cartilage. Fractures of the cartilage in a vertical direction due to traumatism, when the anterior margin of the cartilage is usually seen projecting into one or other nasal vestibule, are very frequently complicated by thickenings forming a ridge along the seat of the fracture, usually due to local perichondritis and thickening of the mucous membrane over the corresponding area. But such thickenings or ridges may arise without any deflection or dislocation of the cartilaginous or bony septum being obvious.

*Causes.*—In a very large number of cases no history of traumatism can be obtained. On the other hand, in a very large percentage where marked deviation or spurs are present, the history of a severe blow is obtainable, and leads to the conclusion that even in the absence of such history some forgotten blow or injury has been the determining cause, for it is obvious that very few pass their time of childhood without being exposed to causes which might give rise to such defects.

It is probable that in earlier life any deflections of the septum may be relatively slight in degree, symptoms only arising long after, when, either from irritation in the region of the resulting crest or from the gradual increase of the deflection due to the suction action of respiration, the original deformity has become aggravated. But considerable deformities and deflections of the septum often exist without any symptoms whatever, and it is certain that in at least a considerable number, when symptoms ultimately do arise, it is owing to conditions which have led to turbinal hypertrophy.

The deformity of the palate resulting from nasal stenosis, viz., the V-shaped or vaulted palate is considered by some

authorities to be a cause of septal deflections; while others consider that these septal deformities are due to the developing septum being out of proportion to the bony framework of the nasal fossæ. Probably in a certain proportion of cases these developmental factors influence the origin of the septal defects; but I am more and more convinced that traumatism is, even in the absence of the history of blows, by far the most frequent cause of the condition.

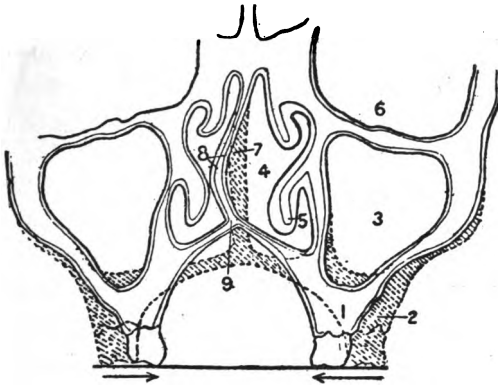


Fig. 1.

*Diagram showing the formation of the high narrow palate and the deformity of the nasal septum resulting from nasal obstruction. The arrows indicate the line of action of the compressing force. (After LAMBERT LACK.)*

Inasmuch as many persons who complain of no symptoms and exhibit no signs of nasal defects of any kind whatever are found in the course of examination to have considerable septal deflections or crests, it is important in determining the necessity for interference to be guided by the presence or absence of symptoms which call for removal of the septal defect. Yet very distressing symptoms may arise in cases where the nasal passages are sufficiently patent to allow nasal respiration from the lower portion of the nasal passages, but where, either owing to organic obstruction or to persistent nasal catarrh, the normal air tract is so stenosed as to prevent respiration along that tract.

Investigations such as those of Scheff and Kayser, and of

Parker, have shown that the inspired air normally ascends in a curved direction from the vestibule into the middle and superior

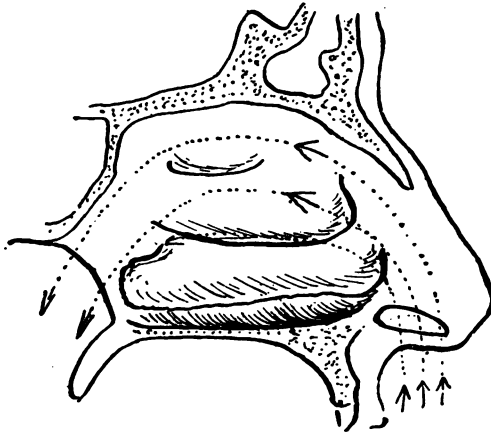


Fig. 2.

*Diagram to show the normal path of inspired air through the nasal passages.*

meatus, and thence gradually descends posteriorly to the choanæ. (Fig. 2.) Stiffness in the nose resulting from ordinary cold, and the deficient respiration shown by children who are subject to adenoid

growths, is essentially due not so much to actual stenosis as to the rhinitis and catarrh which prevents respiration through these normal air tracts. So we often find in cases of septal deflection that patients exhibit symptoms of nasal stenosis when the deflection is somewhat high up and far back, while the combined respiratory capacity of the lower nasal passages would suffice for respiration. The observance of

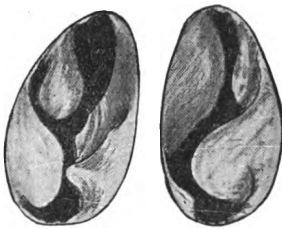


Fig. 3.

*Double or S-shaped septal deflection—rectified by sub-mucous resection, and by ablation of the over-full anterior end of the left inferior turbinal.—W. W.*

this fact becomes all the more important when one has to choose the particular form of operation for the relief of a given case,

since we shall see that for this latter class the only satisfactory method is that of submucous resection. (Fig. 3.)

Undue fulness of one or more of the turbinated bodies, amounting to hypertrophy, may cause nasal stenosis, and it is sometimes necessary to reduce the enlarged turbinal by the galvano-cautery or by partial ablation. When the septum is deflected, the turbinated body corresponding to the resulting concavity very frequently undergoes a compensatory hypertrophy, so as to project into and partly fill this concavity. In some cases the nasal stenosis may be overcome from simple reduction of the size of the turbinals, by removing quite a small portion, rendering any interference with the septum unnecessary. But when a septum has to be straightened, such hypertrophic enlargement of the turbinal on the concave side will obviously tend to block the air-way more than ever, so that the previously patent side would become stenosed. This point must always be taken into consideration before rectifying the septal deformity, the anterior end of the hypertrophied turbinal, whether it be the middle or inferior, being ablated or otherwise reduced either a short time before or at the same time as the septal operation.

*Operative Methods.*—Of the numerous methods that have been advocated for the restoration of the septum, it is safe to say that many will now be relegated to the past in view of the eminently satisfactory results which can be obtained by submucous resection. Space prevents my alluding to more than three of the chief methods now employed, viz. Gleason's operation, Moure's operation, and sub-mucous resection, the latter alone calling for detailed description on account of its applicability to all cases and of the technical difficulties in its performance.

**Gleason's operation** can be commended where one has to deal with fairly hollow C-shaped deflections of the septum over a limited area, restricted to the triangular cartilage, and where there is no marked thickening of the septum as a whole.

It consists in making a U-shaped flap of the deviation either by transfixing the deviated portion of the convex side by



a narrow-bladed knife, which is passed through the cartilage just in front of the higher portion of the deflection, and then made to reappear on the same side by transfixing the cartilage again just posteriorly to the deflected portion, the knife being then carried vertically downwards until it is below the deflection, when it reappears; or a saw is made to cut the deflection from below upwards with much the same result. In either case the tongue-like flap of septum, with its mucous membrane and perichondrium intact, is hanging attached by its superior border.

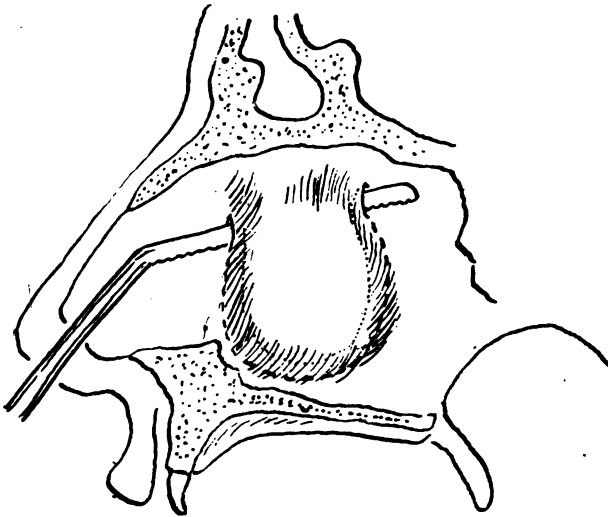


Fig. 4.

*To show the method of making the flap in Gleason's operation.—W. W.*

This is then forcibly pressed through to the concave side with the finger, care being taken to overcome the resiliency of the cartilage at its attachment. (Fig. 5.) The oblique direction of the incision ensures that the margins of the flap extend somewhat beyond the margins of the septal incision: thus when the flap has been passed through it cannot spring back again. If necessary, a splint is inserted on the concave side, sufficient to maintain slight pressure on the margins of the flap against the corresponding portions of the septum on the concave side, and this in the course of a few

days results in union. In the majority of cases which are suitable for the operation the result is very satisfactory, but it is obvious that if the septum is thickened where it was deflected this

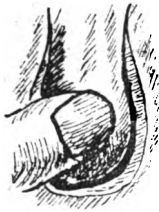


Fig. 5.

*One method of pushing the U-shaped flap in the septum to the concave side.*



Fig. 6.

*Diagram showing how the flap is automatically retained in position.*

thickening will be liable to cause obstruction of the formerly patent side. (Fig. 6.)

**Moure's operation** consists in making the incision from before backwards, along the horizontal crest or lower portion of the

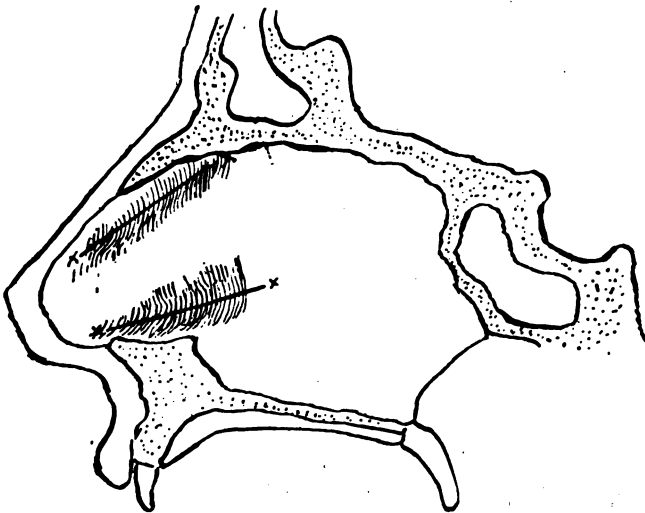


Fig. 7.

*Showing the lines of incision in Moure's operation.*

septal deviation parallel to the floor of the nose, and a second incision parallel to the anterior margin of the triangular cartilage, along the whole length of the deflection above, and with the finger or suitable septum forceps causing fracture of the cartilage towards the formerly unobstructed side, so as to overcome the resiliency of the cartilage. The cartilage is kept in the new position by means of Moure's or other suitable nasal plugs, and these at the end of a week are dispensed with, when the union has generally taken place. In some cases it may be necessary to subsequently trim the margins. Here again it is obvious that the operation can only be applicable to cases where there is sufficient room on the non-obstructed side to receive the deflected portion, and this can only be where deflection is simple, and has not undergone much thickening. (Fig. 7.)

The advantage of these operations is that they are quickly performed, and do not call for such technical skill as is essential for successful sub-mucous resection.

**Sub-mucous resection** essentially consists in the removal of the deviated portion of the cartilaginous and bony septum, while at the same time completely preserving the mucous membrane and perichondrium, a thickened and deflected septum being replaced by one that is thin, straight and stiff. It is thus suitable for every kind of septal deflection or spur, whether it is or is not associated with thickening of the septum, while for cases where the septum is considerably thickened it is the one method which most satisfactorily overcomes the difficulty, and ensures normal and patent nasal passages without destruction of the mucous membrane.

It is always possible in persons of good nerve and considerable self-control to do this operation with local anæsthesia alone, but the long time often required to do all that is necessary makes it very trying to the majority of individuals; and the prolonged strain, even in the absence of pain, makes it preferable to resort to general anæsthesia as a rule. If one depends on local anæsthetics, cocaine, eucaïne, or novocaine can be used, and must be applied in solutions of considerable strength; but the fact that cocaine is not infrequently trying to the patient makes

it the more desirable to have them under general anæsthetics whenever possible. In any case, adrenalin solution should be applied, so as to cause vascular constriction, and it is important to allow sufficient time for the action of the adrenalin to take place before commencing the operation.

Difficulties attending local anæsthesia for septal resection would seem to have been satisfactorily met by Miller's method of locally applying a solution made by placing 20 grains of cocaine crystals in a shallow dish, and dropping sufficient adrenalin chloride solution 1 to 1,000, to dissolve the crystals. The solution is carefully applied to the area of mucosæ to be operated on. To better the patient's self-control, he administers a draught just before applying the cocaine, containing 10 grains each of the bromides of sodium, potassium and ammonium, with 1 drachm of aromatic spirit of ammonia. Miller reports that his last forty cases were operated on with this method of local anæsthesia painlessly, and with minimum of hemorrhage.

The patient should be lying on the back, with head and shoulders raised, and a very good illumination is essential.

The incision for simple ridges and spurs should extend from behind forwards along the summit of the ridge in its whole length, turning upwards for a quarter of an inch at the anterior extremity, the subsequent stages of the operation being similar to that for general deflection.

There are three different methods of incising the mucous membrane:—(1) The triangular J-shaped incision; (2) the single buttonhole incision; (3) the author's method of incising the mucous membrane on both sides.

**J-shaped incision.**—If the variety of deflection is double-angled, with a vertical and horizontal crest, as shown in the accompanying figure, the first incision is usually made as suggested by Freer, along the angle of vertical deflection, beginning high up above the deflection, and extending right down to the horizontal ridge. Then a horizontal incision is made along the crest of the ridge, extending from the bottom of the vertical cut forwards almost to the front of the septum. This incision should cut just into but not through the cartilage, for if the

muco-perichondrium be not divided, when one comes to lift the muco-perichondrium the mucous membrane alone may be separated and raised from the perichondrium beneath, instead of both being together raised from the cartilage. A triangular, anterior flap of muco-perichondrium is thus outlined, and this

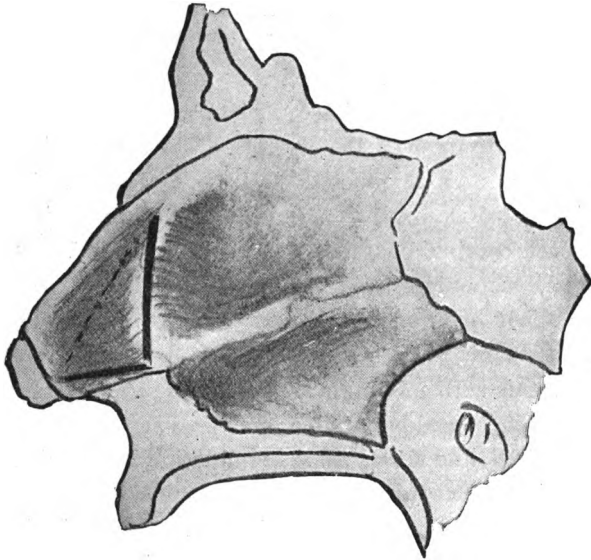


Fig. 8.

*The J-shaped incision, the mucosa being raised towards the front, exposing a triangular piece of the cartilage, which is cut through along the dotted line corresponding with the base of the exposed triangle.*

should be carefully reflected, and then held forward by a small pledget of wool, much care being taken to avoid perforation of this anterior flap. The muco-perichondrium is then raised below the horizontal incision by means of a suitable elevator right down to the floor of the nose. Next the perichondrium of the septum posterior to the vertical incision is lifted until the whole has been removed corresponding to the septal deflection, extending down to the floor of the nose, and if necessary to the posterior border of the vomer. In this way the cartilage, and where necessary the bony septum, is bared and exposed on the convex side over and somewhat beyond the whole area of deflection. Either with a round-edged chisel or a suitable

septum knife, the cartilage is then incised, the incision extending *along the base* of the triangular flap, care being taken to leave at least a quarter of an inch corresponding to the anterior free border of the septum above, in order that there may be no risk of the falling-in of the nose. The incision must not extend through the perichondrium on the opposite side, and in making this incision the left forefinger should be inserted into the opposite nostril, so that no puncture shall be made. The muco-perichondrium is then raised from the concave side over the area corresponding to that alluded to in the first instance, care being taken to make the reflection right down to the floor of the nose on this side too.

**The single buttonhole incision** may be made about a centimetre and a half behind the septum cutaneum or columella, near the floor and extending upwards and forwards, being about threequarters of an inch long, nearly parallel to the anterior free margin of the cartilage but curving away from it below. The muco-perichondrium is then lifted on the convex side as in the first instance, but without making any triangular anterior flap. The cartilage is next incised without cutting through or perforating the mucosa on the opposite side, and the muco-perichondrium lifted from the concave side from before backwards.

**The author's method of incision on both sides.**—In many cases it is a matter of difficulty to incise the triangular cartilage in the manner described above without perforating the perichondrium, which is lying intact with it; and in order to avoid this contingency I have been in the habit of first making a small incision of the mucous membrane on the concave side, *well in front* of the site selected for the usual buttonhole incision, which is to be made on the convex side. A very narrow elevator is inserted so as to raise the muco-perichondrium, and by a movement of the distal end of this elevator upwards and downwards the muco-perichondrium is lifted from a considerable area on the concave side. (Figs. 9 and 12.) The elevator is then drawn out through the initial puncture, much as one would use a tenotomy knife. In this way the muco-perichondrium on the concave side, having already been lifted, when the incision comes to be made

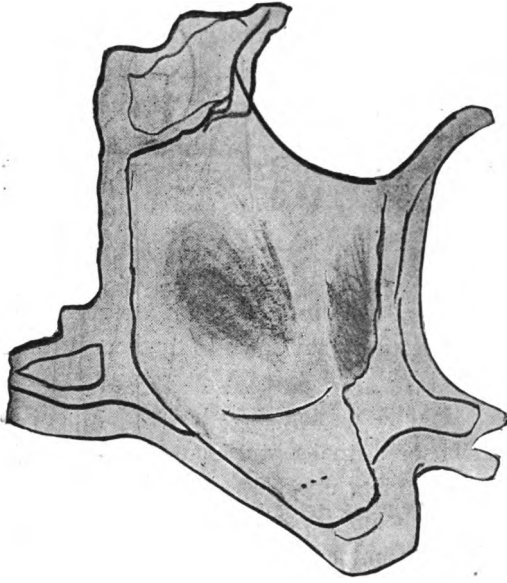


Fig. 10.

*The usual buttonhole incision on the convex side. The dotted line in front shows the position of the small anterior incision on the concave side.*

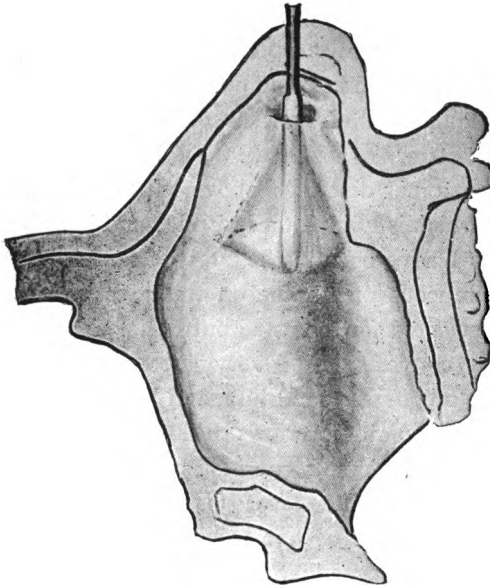


Fig. 9.

*To show the author's method of making a small anterior incision on the concave side.*

in the usual way through the cartilage from the convex side there should be no risk of perforation, because the curtain of muco-perichondrium on the concave side is simply pushed in

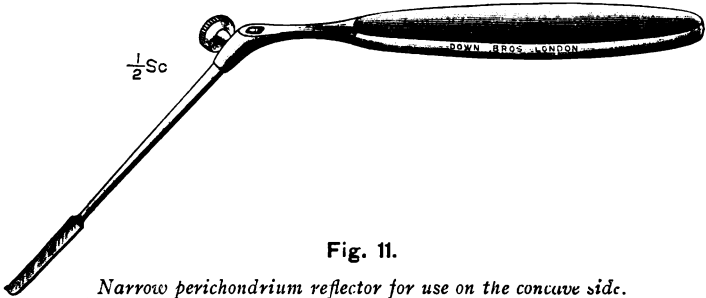


Fig. 11.

*Narrow perichondrium reflector for use on the concave side.*

front of the knife. The subsequent stages of operation are the same, whatever incision has been made. (Fig. 10.)

Speaking generally, the advantage of the L-shaped incision is that the incisions are made along the crests or angles of the deflections, and, as Freer has pointed out, it is easier to dissect the

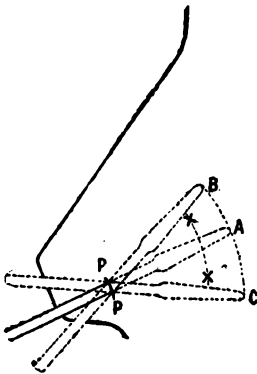


Fig. 12.

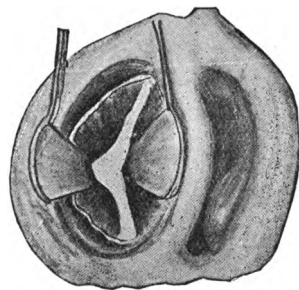


Fig. 13.

*The two curtains of muco-perichondrium held apart, exposing the cartilage.*

muco-perichondrium from the summit of the ridge downwards on either side than it is by incising altogether in front of it to dissect the perichondrium first up to and along the summit and downwards along the farther side. Especially is this an advantage if the vertical ridge be sufficiently near the front to be accessible. When, however, the deflections are situated well back it is a



greater advantage to utilise the buttonhole incision, or, to my mind, the double buttonhole which I have described.

Having thus laid bare the entire area of the septum, both cartilaginous and bony, corresponding to the deflections which may extend only to the quadrilateral cartilage, or, as we have seen, occupy the vomer and perpendicular plate of the ethmoid it finally remains essential to remove the whole of this deflected area. If any portion of the deflected area be left above or below, although it may seem insignificant as the cause of subsequent stenosis, it becomes of importance owing to its preventing the two curtains of muco-perichondrium (Fig. 13) hanging vertically in apposition in the mid-line, therefore interfering with their subsequent adhesion, and also because any intervening space may become filled with blood-clot, which may suppurate or become filled up with granulation tissue, leaving a thickened or irregular septum, instead of a thin, straight septum, which is the great end of the operation. In removing the deflection, it is

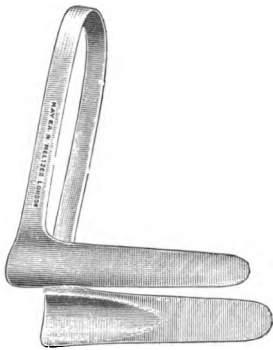


Fig. 14.

*St. Clair Thomson's speculum.*

convenient to hold apart the two curtains of muco-perichondrium by means of a long speculum, such as St. Clair Thomson's (Fig. 14) or Tilley's, or one may use Killian's speculum for median rhinoscopy. The cartilage should be removed by Ballenger's swivel knife (Fig. 15), applying it either at the lowermost part of the cartilaginous margin, or the uppermost angle, carrying it forwards until it reaches the bony septum, being then turned upwards or downwards as the case may be, and encircling if necessary the whole

of the cartilage between the maxillary crest to within a quarter of an inch of the superior free margin of the cartilage. The knife is drawn out, having cut through the cartilage, which can then be lifted out readily with forceps. Subsequently the perpendicular plate of the ethmoid or vomer, if the

seat of deflections or crests, are clipped away with cutting forceps.

The maxillary nasal spine and vomerine ridge must now be dealt with. The nasal spine may be prised away with forceps or removed by hammer and chisel, great care being taken not to wound the lower portions of the perichondrial flaps. If the ridge posteriorly is displaced or thickened it is clipped away, and then it only remains to wash away the debris, bring the curtains of muco-perichondrium into position, and very lightly pack the nasal passages on either side with strips of gauze, just sufficient to exert very slight pressure. By these means we keep the two flaps in their position, and not only ensure primary union, but prevent the accumulation of blood between the layers, which may cause subsequent trouble by suppurating. The following day all packing may be removed and the nose cleansed with warm antiseptic and alkaline solutions, which may be repeated daily

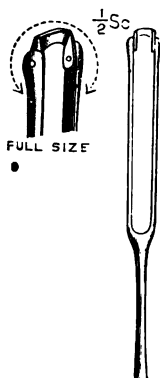


Fig. 15.

*Ballenger's swivel knife, modified to hold flaps of mucosa apart on cutting the cartilage.*

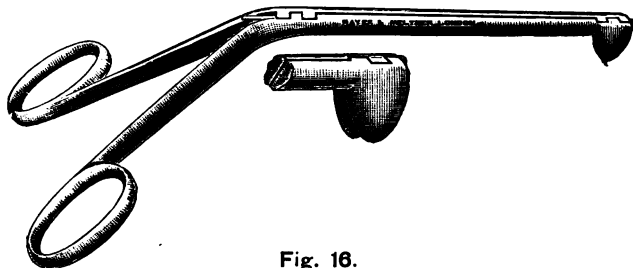


Fig. 16.

*Wood's forceps for removal of maxillary crest.*

until at the end of a week the parts will be healed and complete union have taken place.

The drawback to the operation, which has such eminently

satisfactory results, is that it takes considerable time, and though much care and patience be observed, perforation may result. Although these, if far back, may be of no moment, yet when they are near the anterior end of the septum they are found to catch dust or form crusts, or if they are only small perforations they may cause whistling sounds during respiration through the nose. Such contingencies, however, would rarely happen in the hands of a skilful operator.

Occasionally a septum becomes not only enormously deflected, but in process of development obviously increases out of all proportion to the other nasal structures. In one case under my care the deflection was so pronounced that the angle caused a slight elevation on the outside of the nose, and extended right across the nasal passage so as to completely obtrude it, while the posterior deflection on the opposite side also caused stenosis there. The intervening area on the concave side showed an enormous depression, which at first sight looked like a very large perforation. The case also was complicated by double empyema of the antra, doubtless mainly resulting from the retention of the nasal secretion owing to the deflections. In this case it was quite impossible to do resection, and the only way to relieve it was to resect a portion of the septum and leave the perforation.

It is remarkable that despite the entire removal of the cartilage between the layers of the perichondrium, which for a time will move like a curtain when touched with a probe, or even during respiration, yet nevertheless will become so stiff in the course of a few months as to give rise to the impression that cartilage has re-formed, which, of course, never can occur.

A very large number of these operations have now been done over a period of several years, and there seems to be no risk of depression of the nose externally. But in order to render this impossible, it is desirable to leave a quarter of an inch of free margin corresponding to the upper border of triangular cartilage above the lateral cartilage. Cases have been recorded where even a severe blow on the nose in patients who have undergone sub-mucous resection no deflection or depression has resulted.

How far one can wisely remove the bony or cartilaginous septum in children it is hardly safe to say without a larger number of cases before us than have yet been reported, but several instances in which quite young children have undergone the operation successfully, and without interference with their nasal development, have been recorded, and I have myself in one case removed a large portion of the anterior end of the triangular cartilage in a boy aged nine, and although that was

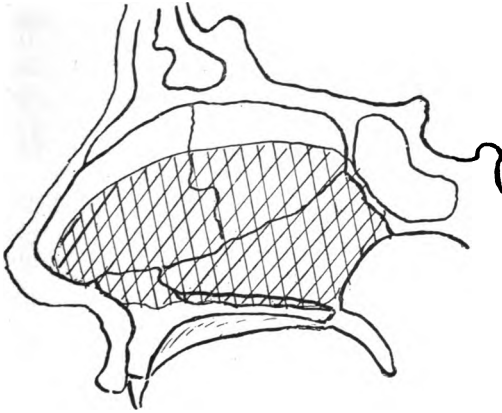


Fig. 17.

*Showing the actual area of the septum removed with excellent results in one of the author's cases.*

several years ago and he is grown up, his nose has developed well without trace of depression.

Indeed, it may be said that in children where stenosis exists nasal development would be far more interfered with if the cause be left, apart from all the other unfortunate results to nasal stenosis in a growing child, than could be the case from an adequate removal of the septal defects.

The Krieg-Bonninghaus operation, known also as the **Fenster resection**, consists in removing the whole of the cartilage or bone forming the deflection, together with the corresponding part of the muco-perichondrium on the convex side, and leaving the single bared muco-perichondrium of the concave side to form the new septum. It was originally introduced by Krieg and revived by Bonninghaus in 1900, but though still preferred by some

operators, has been generally superseded by the more satisfactory, though slightly more difficult, operation of sub-mucous resection. An J-shaped incision is made on the convex side, the vertical incision in front of, and the horizontal extending below the whole of the deflection. The incision is made to cut through the cartilage without perforating the mucosa of the concave side, which is then raised as in the sub-mucous operation. The deflection, together with the mucous membrane of the concave side, is then removed bodily by scissors or cutting forceps. The fact that this procedure leaves a large bare surface of the mucoperichondrium of the other side, which takes some weeks to granulate and become covered with epithelium, is a serious drawback, though the ultimate result is usually satisfactory. The operation is nearly as difficult and tedious as the sub-mucous method, but the after-treatment is much more tedious, and the result is not so certain to be satisfactory, and I now never have recourse to it.

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## TWO CASES OF RUPTURED INTESTINE.

BY

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 Bristol Royal Infirmary.*

As cases of rupture of the intestine do not appear to be very common, and as, at any rate, cases operated on are seldom reported, it seems to me that these two successful ones are worthy of record.

**Case 1.**—Joseph K., æt. 35, was admitted to the Bristol Royal Infirmary on the evening of July 27th, 1904, complaining of severe abdominal pain. He had been struck in the epigastric region, slightly to the left of the middle line, by the pole of a swing-boat. He was taken unawares, being quite unprepared for the blow. He walked into the Infirmary. He was an exceedingly poor man, and had had no food for eight hours. He was much collapsed immediately after the blow, and in a few minutes vomited. After a time he recovered sufficiently to walk to a tram and come to the Infirmary. On admission he was rather collapsed, his abdomen hard and tender in the upper part, pulse good, 62, and temperature 95° F. He was watched for two hours, and during this time vomited three times, the total amount, however, being only two ounces. I saw him at this time, and his pulse was 72, very good, his temperature 97° F., and his abdomen rather hard and tender in the epigastric region. There was some blood in the vomit, corpuscles being seen with the microscope. The nature of the accident and the history strongly suggested to me a rupture of the intestine, and the abdomen was opened at once, four hours after the accident, by a median incision above the umbilicus. Blood appeared on opening the peritoneum, and on displacing coils of intestine was seen to come from the neighbourhood of the spleen. There was no sign of stomach or intestinal contents except a little sticky mucus. The stomach and spleen were carefully examined, but no rupture detected. The small intestine was then pulled out from the upper abdomen, and upper part of the jejunum being exposed, a large tear was seen involving nearly half the circumference of the bowel, but being placed obliquely to its long axis, in its fixed part just beyond the duodeno-jejunal junction. The thick mucous membrane was markedly everted, giving rise to a red-looking tumour. The blood was mopped out, and the mucous membrane sewn up with a continuous catgut stitch. The peritoneal and muscular coats were brought together with interrupted Halsted's stitches, and outside these one or two supporting Lembert stitches. The suturing was a little difficult owing to the fixed position of the bowel posteriorly. The abdomen was washed out with saline, and some of this left in, and a large cigarette drain inserted down to the line of suture. The rest of the wound was sewn up. Four days later the drain was removed and replaced by a very much smaller one, which was removed next day. He was allowed only water and brandy by the mouth for the first few days, and was given nutrient enemata. Other fluids were soon added, but no actual solid food until the fourteenth day, when the stitches were removed. He made an uninterrupted recovery, and never thought there was much the matter with him; consequently, we had great difficulty in keeping him in bed and making him submit to the restricted diet. He was discharged on the twenty-

eighth day, and seen about a year later was remaining quite well.

**Case 2.**—Charles J., æt. 16, was admitted to the Bristol Royal Infirmary on the morning of September 17th, 1906. He was working in a fitting shop when the arm of a crane swung round and struck him in the abdomen, pinning him against some railway sleepers. He was set free by the wood being sawn away from behind him. He then, to use his own expression, got up, put his hands in his pockets and walked to the office. On admission he appeared to be somewhat concussed (there was a scalp wound), and the abdominal symptoms masked; he was somewhat pale, pulse 84, and temperature 97° F. Abdominal rigidity soon appeared, and rapidly became more marked. He also became blanched, and in two hours his pulse rose from 84 to 120 per minute. When I saw him, about four hours after the accident, he was clearly suffering from internal hemorrhage. Pallor was extreme, pulse 136, restless, and much abdominal pain and tenderness, with rigidity most marked under the upper part of the left rectus. I made a probable diagnosis of rupture of the left lobe of liver or spleen, and would have operated at once, but had to wait nearly two hours to obtain the consent of the parents. Six hours after the accident I made an incision in the middle line above the umbilicus, and rapidly examined the liver and spleen, and found them normal. From amidst a large mass of blood-clot to the left I delivered a piece of intestine, jejunum I judged by its thickness, completely torn through transversely in its whole circumference, and including two to three inches of its mesentery. It might almost have been done with a pair of scissors, except that the mucous membrane was somewhat jagged. The mucous membrane was everted, and what I took to be the upper end of the bowel was filled with blood-clot. There was an artery spurting in the mesentery. There was no sign of extravasation of intestinal contents. I judged that the injury had probably been caused by the crane tearing the bowel across the spine. The bleeding vessel was ligatured, the mesentery sewn up on either side with sutures applied after Lembert's method with silk. A continuous stitch brought the mucous membrane together, and the peritoneo-muscular coats were united with continuous Lembert sutures starting on either side at the end of the mesenteric sutures and being united in the middle line. As the bowel could be delivered outside the parietes, the suturing was easy, and was performed rapidly, as the condition of the patient was precarious. No attempt was made to swab or wash out the abdomen or to remove the blood-clot. Saline fluid was run into the abdomen whilst the wound was being sewn up, and no drainage was made. For the remainder of the day the boy was extremely bad, and had rectal injections of saline, and saline infusions into the veins, nutrient enemata, and only water and brandy by the mouth. His tem-

perature rose to 100° F. the night of the operation, but there was never fever after this. For two days his condition gave rise to some anxiety from abdominal distension and rapid pulse, but after this his recovery was interrupted. He ate chicken on the ninth day, the stitches were removed on the fourteenth, and he was discharged at the end of a month. I saw him two months after, and he seemed quite well.

In addition to these two cases, I have distinct recollection of three others under the care of my colleagues during the past five or six years, two of which recovered and one died. The latter was extremely bad at the time of operation, and his abdomen was found full of fæces. I am therefore led to suppose that traumatic ruptures of the intestine uncomplicated by other serious abdominal injuries give very favourable results when operated on early. It is therefore of the first importance to make an early diagnosis. This is by no means always easy, for the symptoms may be very equivocal, and cases are on record where patients have walked long distances after this accident. I am disposed to lay considerable stress on the nature of the accident. This will be found most usually to be a sudden, well-localised blow. Of causes that have actually come under my own observation may be mentioned the following :—A kick from a horse, coming in contact with the point of a shaft of a cart whilst riding a bicycle, falling on to the handle of a pick, and being struck by the point of a pole (Case I.). There is usually initial collapse, and frequent vomiting is said to be an important symptom. When it is present I think it is so, but I don't know that I should feel inclined to lay a great deal of stress on its absence. My second case had none. The one symptom which I think is, perhaps, of more value than any other, following on such an injury as I have suggested, is rigidity of the abdomen. This may be marked or only slight, and limited to the area struck, but it is none the less of great importance. There were some who thought there was hardly sufficient indication to operate in my first case, but the nature of the accident, plus the rigidity, decided me. There was also frequent vomiting, considering the length of time that elapsed and the absence of food from the stomach. The pulse, however, was no assistance whatever, and this is not infrequently the case, whilst in another class



of abdominal conditions, notably appendicitis, it may be the best guiding sign of the serious condition of the patient. I was fortunate in these two cases in that there was no obvious extravasation of fæces in either. This was accounted for to some extent by the bowel being more or less empty, but also by the way the thick mucous membrane of the jejunum becomes everted, almost completely blocking quite a large hole. Blood-clot also helps to block the opening. My second case was of interest in that the symptoms of internal hemorrhage quite masked those of intestinal rupture, and thus made it a complicated case. The blood came from torn vessels in the mesentery. It would appear that in cases of this kind, without visible fæces in the peritoneum, it is quite safe to sew up the abdomen without drain, as is shown by my second case, and I have little doubt my first would have done equally well, but I felt a little uncertain about the suturing as it was difficult. It is also clear that it does no harm to leave a large mass of blood-clot in the abdomen. With regard to the vexed question of flushing the abdomen, I would suggest that this procedure be limited to those cases in which there is wide diffusion of fæces, and that in the other cases the locally infected area be carefully swabbed dry, with as little disturbance of the neighbouring parts as possible. Treves says, in his *System of Surgery* (1896), that the jejunum is the most common seat of rupture (two of the three other cases referred to were ileum, and the third I do not remember), that in only 16 per cent. of all cases is the rupture complete, that in about 70 per cent. there is escape of fæces into the peritoneal cavity, and that in about 15 per cent. there is a rent in the mesentery. The following results of operation are given: 24 cases of incomplete rupture with 11 deaths, and 4 cases of complete rupture with 3 deaths.

CONCLUDING NOTES ON A CASE OF  
SPLENOMEGALIC CIRRHOSIS IN A CHILD AGED  
SEVEN YEARS.

BY

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TWELVE months ago I showed before this Society a boy, aged six years, with enlargement of liver and spleen, slight jaundice, stunted growth, and clubbing of fingers and toes. Abdomen was enlarged, surface veins distended. Liver dulness extended from the sixth rib to the level of the umbilicus. Spleen also much enlarged, extending within a couple of fingers' breadth of the iliac crest in the mid-axillary line; its notch could be felt on the outer border within  $2\frac{1}{2}$  to 3 inches of the middle line; it was dense and smooth. No evidence of ascites, no œdema of legs, but on each leg a few petechiæ. There was nothing distinctive in the blood picture. I regarded the clinical signs as falling in with the juvenile group of cases described by Gilbert and Fournier. On March 7th, 1906, the boy was discharged improved—no jaundice, liver not diminished in size, spleen certainly smaller. His motions had averaged one or two daily; they occasionally contained blood. The urine on only one occasion contained albumin. The boy was readmitted on May 9th, 1906. Liver was two inches below costal margin and was felt to be nodular. Spleen as before. Towards the end of June he was not so well, had slight rises of temperature, was drowsy, and abdomen began to fill. There was hæmaturia and œdema of legs, with blood in the motions. His mouth was ulcerated, and there were petechiæ on the legs. During the month of July paracentesis abdominis was performed three times, and  $4\frac{1}{2}$ ,  $3\frac{1}{2}$  and  $1\frac{3}{4}$  pints of fluid were withdrawn, which afforded the patient much relief. The rises of temperature and drowsiness, with petechiæ and pain in the left side, seemed to denote an extra dose of poison in the system. On August 8th

there was a slight reaccumulation of fluid, and 12 ounces were withdrawn. During September the child gradually lost ground. On October 2nd 36 ounces were withdrawn; child was very anæmic, with a murmur over the mitral area; skin again yellow, with traces of bile in the urine. About a month before his death he suffered from diarrhœa, with profuse watery motions, sometimes bloodstained. The motions averaged six, seven, and occasionally more a day. There was no further accumulation in his abdomen until a few days before his death, on November 27th. Leucin and tyrosin were not found in the urine. There was never any reason to suspect alcoholism, nor were there any signs of congenital syphilis. There was a doubtful history of paternal syphilis.

It is difficult to say what amount of splenic enlargement justifies the use of the word "splenomegaly." In my case the spleen seemed, when the child was first admitted, to be of excessive size. There is no doubt the spleen did diminish in size as the disease progressed. At the autopsy the spleen was found to weigh nine ounces, which is three times the average weight of a child aged seven years. The liver weighed 1 lb. 9 oz. Macroscopically it looked markedly cirrhotic, while microscopically a coarse, multilobular cirrhosis was the outstanding feature, with some increase in the number of bile-ducts. This condition cannot have anything to do with Banti's disease, which is the termination of the splenic anæmia of adults in multilobular cirrhosis and ascites. The second dentition is the earliest age at which the splenic anæmia of adults occurs, and the splenic anæmia of infants is a totally distinct affection, which seldom occurs after the age of two years. The poison may be manufactured in the intestine and conveyed to the liver by the portal vein, and thence to the spleen, or it may be introduced into the systemic circulation and have a selective affinity for the liver and spleen. There is no history of any infectious disease in my case as in some of the cases recorded by other observers.

The notes on the *post-mortem* appearances by Dr. J. M. Fortescue-Brickdale were as follows:—

The child was emaciated and jaundiced. The thyroid was

normal, the thymus was fibrotic and wasted. There were extensive pleural and pleuro-pericardial adhesions, especially on the left side in front. The left pleural cavity was, however, not completely obliterated, and contained some milky fluid, which showed no fat globules under the microscope, and coagulated readily on heating. The heart was normal; the lungs somewhat œdematous. There was a considerable amount of ascites. The small intestines were normal; there was a small recent ulcer in the cæcum, and the colon appeared thickened and œdematous. The liver weighed 1 lb. 9 oz.; it was "hobnailed" in appearance, and the left lobe was especially shrunken and fibrotic. The spleen was firm and dark; it weighed 9 oz. There was perihepatitis and perisplenitis. The kidneys were normal.

Microscopically the spleen showed some congestion of the Malpighian follicles and thickening of the capsule and trabeculæ; the liver showed a cirrhosis of multilobular type, and in places there were collections of bile-ducts in the fibrous tissue bands, but it was difficult to say that any definite increase in these existed.

From the pathological appearances it was not possible to say which organ, liver or spleen, was first affected. There was nothing inconsistent with the diagnosis of splenomegalic cirrhosis of infantile type, as may be seen by reference to the published reports of cases. Dr. Taylor's case<sup>1</sup> gives a very close parallel, and in Dr. Parkes Weber's case<sup>2</sup> a similar coarse fibrosis of the liver existed. The spleen in the present instance, though enlarged, was certainly smaller than in most recorded cases; but in Gilbert's paper,<sup>3</sup> cases in which the spleen is only moderately enlarged are definitely included in the group.

There was no pathological evidence of syphilis, unless we are prepared to say that *any* case of obscure fibrosis of the liver is due to this cause. The number of bile-ducts and the character of the fibrosis were not such as to suggest Hanot's disease, and, moreover, there was no leucocytosis during life.

<sup>1</sup> *Guy's Hosp. Rep.*, 1897, liv. 1.

<sup>2</sup> *Tr. Path. Soc. Lond.*, 1895, xlvi. 71.      <sup>3</sup> *Semaine m'd.*, 1900, p. 186.

## ACQUIRED ANGIOMA OF THE LIVER.

BY

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*House Physician to the Bristol Royal Infirmary.*

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THE following article includes a description of a case recently in the wards of the Royal Infirmary under the care of Dr. Shaw, to whom I am indebted for permission to publish the case.

The patient, a man of 50, was admitted to the Bristol Royal Infirmary on November 21st, 1906.

*The history of his illness* was as follows:—About a year ago some “yellowness of the eyes” was noticed. Five months ago he began to complain of pain over the lower part of the chest and epigastrium. Three weeks ago he became worse while at work, and had to sit down, eventually going home to bed. After a fortnight in bed, during which the jaundice became more marked, he tried to put his clothes on, but found his trousers would not meet by several inches, owing to enlargement of the abdomen. He returned to bed, and the swelling increased somewhat rapidly until admission.

*Past history.*—An electrical engineer at a large factory for the last 25 years, he had lived in Bristol all his life with the exception of a few months at sea. He had enteric fever four years ago. No other illness. No hæmorrhoids. Rarely missed work. He drank a good deal of whisky. Appetite good, but occasional retching in the mornings. No specific history.

*Family history.*—Mother died of old age at 87. Father healthy, aged 89. His wife had had eleven children, of whom ten are alive; eldest aged 23. No miscarriages.

*Condition on admission.*—Big, well-nourished man. Decidedly jaundiced. Temperature, normal; pulse, 90; respirations, 28. Nothing abnormal found in heart or lungs. Arteries, not markedly thickened for his age; slight œdema of legs. Urine (first 24 hours' specimen), 22 ounces, brown, s.g. 1012, cloud of albumen, bile. Abdomen, greatly distended; signs of free fluid; measurement, 43½ inches; some large veins running upwards from lower part of abdomen; enlarged liver just felt through fluid; no pain.

*Progress.*—Abdomen increased in size and tension to 44 inches, when paracentesis abdominis was performed in the middle line through a  $\frac{3}{16}$  inch trocar, the patient lying on his side.

Six pints, five ounces of semi-opaque fluid, typical of ascites due to portal obstruction, was the result. The operation lasted 25 minutes, the fluid running slowly and the patient showing no signs of collapse. Immediately afterwards a nodular hard mass, the size of a tennis ball, was easily felt in the epigastrium, in consequence of which a malignant growth of the liver was suspected. The rest of the edge of the liver could not be made out. An abdominal binder was applied. This was the fifth day after admission. The following day he complained of pain in the abdomen, which now measured 42 inches, and during the following days the pain became more and more severe, the patient requiring both strychnine and morphia. Temperature, normal; pulse, feeble. This continued for nine days, when he died, the pain never having abated, and the fluid having rapidly reaccumulated.

*Post-mortem examination.*—Heart, normal. Vessels, healthy. Lungs, normal. Spleen, enlarged, hard and congested. Kidneys, enlarged and congested, bile stained. Pancreas, slightly harder than normal. Glands, no enlargement found, no malignant focus. No peritonitis. No angiomas found in other organs. Liver: weight 7 lb. 12 oz.; colour: brown, bile stained; capsule: adherent and of normal thickness; surface: masses of large, irregular nodules, most marked on the anterior surface, especially in the left lobe, which was enormously enlarged, and of a bluish colour, where it was soft and spongy. Antero-posterior section through the left lobe showed non-capsulated small dilatations throughout, varying in size from a pin's head to a pea; few in the posterior part, but closely packed together in the anterior segment. These dilatations contained blood, and the anterior part was discoloured and nearly black, fading posteriorly into the ordinary colour of an early cirrhotic liver. (*Vide Fig. 1.*)

*Microscopical sections* showed as the most marked feature a separation of the individual hepatic cells, *i.e.* intercellular spaces. In some collections of lobules this condition was exaggerated until cysts were formed, and large spaces were seen in various stages of development. In more recent ones were seen liver cells lying diffusely through the space, but the more cells so found the less distinct was the boundary of the cyst, formed as it was by the liver cells only. In the older spaces this condition was reversed, few or no cells lying within the space, but the edge was more defined, and in more marked cases the liver cells were lying concentrically, as if due to prolonged pressure. The portal systems on the whole were normal. (*Vide Fig. 2.*) In some places there was a slight appearance of cirrhosis and elastic tissue, while in isolated patches there is some small-celled infiltration around the blood sinuses throughout the lobules. The liver cells generally are neither atrophied nor damaged. Sections stained by Weigert's resorcin-fuchsin stain, in addition to the usual methods, demonstrated the absence of fibrous or elastic

tissue in the small-celled infiltration which surrounded some of the larger cysts. The cystic dilatations were principally to be observed in the area of the hepatic veins, and appeared to develop from dilatation of the lobular veins, or by extravasation into the central areas of the lobules. These areas were previously in a state of advanced venous congestion, œdema being particularly well marked. The induration stage of passive hyperæmia was missing, and its absence may account for the unusual extent of the hemorrhages which are usually associated with that condition.

According to Rolleston,<sup>1</sup> angiomas of the liver can be injected from the hepatic artery, or from the hepatic or portal veins.

*Remarks.*—The case is of interest for several reasons.

Firstly, few are recorded. Lancereaux<sup>2</sup> mentions 25, and Schmieden<sup>3</sup> 32 cases, 18 of the latter being single and 14 multiple. They are said to be commoner in men, but Thoma<sup>4</sup> denies this.

Secondly, they may be acquired or congenital, and have been seen in fetuses. (They are said to be comparatively common in cats.) According to Rolleston,<sup>5</sup> the acquired is the commoner variety, and they are then probably due to a combination of local congestion of the hepatic vessels and atrophy of the liver cells. Usually they are quite small, and only very occasionally have large cavernous tumours been seen in adults. In two such cases angiomas were found in other abdominal viscera. Large tumours of this type are usually encapsulated. The case in question was probably acquired, for the following reasons:—The age of the patient; the definite history extending over a period of one year, with a more acute stage of about five months; the irregular character of the condition as regards capsulation, and the extremely large size of the liver, which must have been noticed had it not increased very rapidly during the periods mentioned; the complete absence of any past history of liver trouble; and also, possibly, the slightly cirrhotic condition, connected as it was with a dis-

<sup>1</sup> *Encyclopædia Medica*, 1900, vi. 531.

<sup>2</sup> *Traité des maladies du foie et du pancreas*, p. 528.

<sup>3</sup> *Arch. f. path. Anat.*, 1900, clxi. 373.

<sup>4</sup> *Pathology*, English translation by Bruce, i. 553.

<sup>5</sup> *Diseases of the Liver, Gall-bladder and Bile-ducts*, 1905, p. 461.

ACQUIRED ANGIOMA OF THE LIVER.

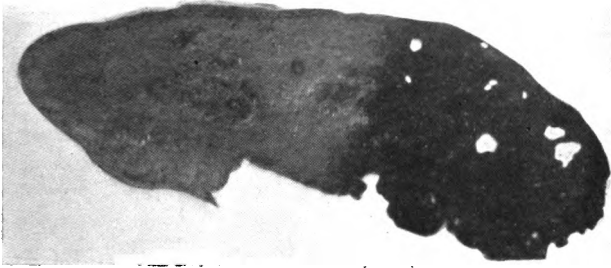


Fig. 1.

*Photograph of antero-posterior section, showing darker area of angioma and spaces from which the blood has been washed out. Slightly less than half size.*



Fig. 2.

*Micro-photograph of section of angioma, showing different types of blood spaces, and a portal system.*





tinctly alcoholic history. The congenital condition is thought by some to be due to an excessive growth of the vascular mesoblast. The acquired type has been explained by a stagnation of blood, and congestion, which induce dilatation of the vessels with atrophy of the intervening liver cells. Some increased fibrosis takes place, so that a cavernous nœvus is produced. This view is supported by Chervinsky,<sup>1</sup> and also by Hanot and Gilbert.<sup>2</sup>

The ascites, the pain, and the size of the tumour are all interesting features. The ascites possibly was accentuated by the cirrhosis also present, and the veins noticed on the abdominal wall would point to a portal obstruction that was not very recent. The pain and failure soon after paracentesis are difficult to explain, especially as the heart showed no signs of acute failure; but the feeble nature of the pulse, and the rapid reaccumulation of fluid during the last few days, suggest a large amount of back pressure from the right side of the heart, probably causing a more acute dilatation of some of the more recently formed spaces. The size of the tumour is remarkable, especially for the unencapsulated form, in so old a subject. Mantle<sup>3</sup> mentions a case in a man aged 33, in which the liver weighed 6 lb. 13 oz., and the angioma hung down eight inches below the anterior edge of the liver, and was of the consistency of the placenta. The left lobe in this case was normal, except for some dilated branches of the portal vein. There was also small-celled infiltration and cirrhosis throughout, but there was no bile in the urine, and only a few ounces of fluid in the abdomen. The tumour was estimated to have contained eight pints of blood, and was only diagnosed after exploratory laparotomy, when a needle being put into the swelling blood spurted out, and, in spite of suturing and plugging, the patient died in two hours.

*The diagnosis* of such cases has usually only been made after laparotomy or death, but the venous hum sometimes heard over the liver area has been thought to be due to this cause. Hale

<sup>1</sup> *Arch. de Physiol. norm. et path.*, 1885, 3 s., vi. 553.

<sup>2</sup> *Études sur les maladies du foie*, 1888, p. 316.

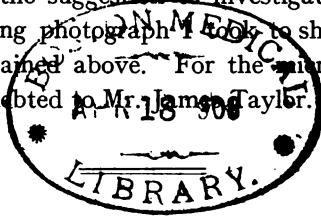
<sup>3</sup> *Brit. M. J.*, 1903, i. 365.

White<sup>9</sup> says angioma is common, but produces no symptoms during life.

*Surgical treatment* by electrolysis is mentioned by Keen<sup>1</sup> as having been performed in four cases, and Cripps has recently removed a capsulated nævus of the liver, previously diagnosed as an ossifying sarcoma, with success. In 1894 Tenedat refers to only six cases in which excision has been carried out.

I am greatly indebted to Professor Walker Hall for laboratory assistance, and for the suggestion to investigate the subject.

The accompanying photograph is to show the cyst-like spaces, &c., as explained above. For the micro-photograph of the section I am indebted to Mr. James Taylor.



## THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS—IS IT A SUCCESS?

BY

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SUCH a mass of literature has been written on pulmonary tuberculosis and its treatment, that I will not trouble the reader by going over any unnecessary ground, but shall confine my remarks to personal observations made during my eight years' connection with the sanatorium treatment of consumption. The pioneers of the open-air movement, most of whom are medical men belonging to various sanatoria, have cause to be proud of the success of their efforts in creating in this country a public interest in the subject. The man in the street, encouraged by the early enthusiasts of the movement, expected that everyone entering the portals of a sanatorium would be cured in a very short time. And even medical men, without giving a due consideration to the question, were led away by exaggerated reports, and pro-

<sup>1</sup> Allbutt's *System of Medicine*, 1897, iv. 211.

<sup>2</sup> *Ann. Surg.*, 1899, xxx. 276.

claimed in private and in public that a few weeks' stay in an open-air establishment would be sufficient to cure a consumptive patient. The inevitable consequence was that the results fell short of the public expectation, and discredit most unjustly fell on the whole movement.

But what are the facts? Speaking from my own experience, I should say, to put it modestly, that in at least 50 per cent. of cases life and health are restored by the open-air treatment. That is, about half the patients of all stages that enter a sanatorium either get well completely or their disease is arrested so as to enable them to return to work.

To give a mere bald statement of figures, we have records of one hundred and fifty patients treated in my sanatorium during the first four years ending August, 1903. Of these, seventy-eight, or about 51 per cent., have been restored to health, and are following their various occupations to the present day. Surely this is a record that any treatment can be proud of, and is worth striving after.

The duration of the treatment has a very important bearing on its success. It is utterly absurd to expect, as some have done, to cure a patient or even arrest the disease in three months. There is no doubt some truth in the insinuation that the patients who have been partly patched up by the open-air treatment and return to unhealthy surroundings relapse more quickly than those who have remained in the old conditions of life, simply because half a cure is worse than no cure. A creaking door lasts longer if left alone, because everyone knows its deficiency and uses it carefully; but it looks strong when it is half mended and painted, and the first careless knock breaks it to pieces. The open-air cure is, I am sorry to say, long and tedious, requiring infinite patience and perseverance on the part of the physician and the patient. It is Nature's cure, and Nature builds well, but slowly. The causes of failure of sanatorium treatment are mainly due to:—

- (a) Medical men not sending their cases at an early stage.
- (b) Patients who at the first sign of return of health go home thinking they are cured.

- (c) Institutions which cannot keep patients for more than two to four months, and then send them back to their former unhygienic surroundings.
- (d) Treating patients at home when no medical supervision or discipline is possible.

The most important cause of failure in my experience is that patients either have no means to continue the treatment for long, or have not the patience to persevere in the sanatorium *regime*. At the first sign of return of health they leave the sanatorium and seek more congenial surroundings. Rigid discipline, cold, absence from home and friends, &c., are unpalatable, and it is most difficult to convince patients that health can only be got back by great sacrifice, that Nature demands strict conformity to her laws. It is one of the signs of this decadent age that patients have not the strength of character or stamina to stand fast and strenuously continue in the fight with the disease.

I go further, and say that the question of arrest of the disease is more a matter of a patient's perseverance in the treatment than even whether he comes under treatment at the first, second or any stage of the disease. This may be a bold statement to make, but nevertheless it is my experience. Over and over again I have known patients who came to the sanatorium in the early stage, and who returned home too soon, partly patched up, with the result that after a few months they succumbed to the disease. On the other hand, I have known others who came to be treated in the cavity stage and with very little resisting power, but who have persevered for two and three winters, and are living now to testify to the efficacy of the open-air treatment. Of course I exclude from the present consideration those cases which seem to go wrong from the very beginning, and which get steadily worse in spite of every care and attention. We do not understand at present the laws that underlie these cases ; some day we shall. I also exclude those cases of advanced stage, where gastric functions are deranged, and the process of assimilation and excretion is poisoned by toxins and other products of pathogenic organisms. But apart from these cases, broadly speaking, the failure or success of the treatment depends more or less upon the

patient himself. In other words, the amount of vitality and fighting force determine the prognosis of almost every case. The sanatorium treatment increases the resisting force of the patient. If he perseveres in the treatment, there is every probability of his increasing his vital force and of overcoming the disease sooner or later.

On the other hand, I foresee that the sanatorium treatment will fail, because patients, from lack of time or means, from lack of inclination or strenuousness, will desire to get well in a hurry, and cannot. There is no short cut to Nature's cure ; she works slowly, but surely. The earth takes just as long to go round the sun as it did some hundreds of years ago, and it has found no short road yet. Various remedies have been brought forward from time to time and exploited as speedy cures for the disease, but they all have been failures so far. Nature cannot be tricked to cure a patient in this way. She proceeds step by step, line upon line, and health can only be regained by strictly adhering to her laws ; and the result of perseverance is a sure and certain success in many cases.

The success of the open-air movement is not merely to be gauged by the number of lives it has been the means of saving, but in a greater degree it is seen by the way in which it opens up larger issues, and rouses the nation to see the evil tendencies of modern thought and modern life, suggesting reforms along national, social and municipal lines. Tuberculosis is one of the evils of present-day civilisation. As long as there are crowded centres like London, Manchester and Liverpool, which are breeding-places for dirt and microbes, one can never hope to eradicate consumption. It is like trying to bale out water from a ship that has sprung a leak. As fast, or faster than you can pump, the water rushes in through the hole and fills the ship. As fast as you can cure patients, their places are filled up by others manufactured by the crowded and dirty towns.

Besides, tuberculosis goes hand in hand with other evil factors in the vicious circle, viz. competition, overcrowding, poverty, drink, a life of bustle and excitement, all of which tend to keep man at high tension and irritation, giving him no time for the

recuperation of vital forces, which are necessary for the maintenance of his health. Nature not only needs time to build, but also rest and quiet to do her work. In silence she manufactures in her secret laboratories the vital energies required to maintain life's functions and duties. Mere giving attention to sanitation, or building large sanatoria for consumption, is like sprinkling carbolic powder over the leakage of drain pipes. The sanatorium treatment is only a part of a great movement which aims at going to the root of the matter. Like the ever-widening circles caused by a stone dropped into a still lake, it tends to widen the outlook and extend its reforms from one disease to the prevention of all disease, and never rests till it has taught the nation to regard the health of its citizens as a sacred heritage, which it should guard at all costs and against all enemies. Looking thus from a broad point of view, the sanatorium treatment can never be regarded as a failure.

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## SOME NOTES ON STYRACOL.

BY

CHARLES REINHARDT, M.D.

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FOR several years after having established the Hailey Open-air Sanatorium for consumption on the Chiltern Hills in Oxfordshire, it was my principle to avoid the administration of drugs so far as possible, and, indeed, medicines were seldom employed excepting for special emergencies.

Nothing has happened to convince me that in ordinary cases of phthisis medicinal treatment in the form of drugs administered internally is of any pronounced advantage amongst patients undergoing the open-air treatment in a sanatorium. I am even inclined to the opinion that those who suffer from incidental troubles, such as dyspepsia, diarrhoea, or cough, are as a rule likely to do quite as well if drugs are withheld, excepting in unusual cases. There is, however, one medicament of which I was forced to make an exception on account of the benefit derived by patients

from its use, and that is guaiacol, which in my opinion is one of the most useful of drugs in the treatment of phthisis.

I was first obliged to arrive at this conclusion owing to an involuntary experiment. A patient—W. D.—arrived at the institution suffering from extensive cavitation of the left lung, both lobes of which were involved, the right lung being apparently free. The case was a chronic one, and had been under treatment at several other sanatoria. There was a moderate amount of cough and expectoration, but the temperature was normal, and I was able to give a fairly good prognosis. The patient had been taking guaiacol regularly, but on my advice this was at once discontinued.

It often happens that patients entering an open-air sanatorium make rapid and immediate progress, the symptoms abating and an increase of comfort and of vigour being experienced. This reaction is, of course, gratifying, even though the rate of progress is not always maintained. In the case to which reference is being made, however, the reaction or early access of improvement did not occur, to the disappointment both of the patient and myself, and for some time the condition of the former remained almost stationary, though there was a slight increase in the amount of cough, and an undoubted increase in the râles at the apex of the right lung. There was also some amount of diarrhoea. I attributed the want of apparent benefit partly to the chronicity of the case and the fact that the patient was in no sense new to sanatorium life, and partly to a certain boisterousness and excitability of temperament which he displayed. He, however, insisted that his progress had ceased when he gave up his diurnal doses of guaiacol. After six weeks had elapsed without noticeable benefit, a sudden improvement commenced, and it went on without interruption. Some time afterwards I found him in the act of taking a dose of guaiacol, and to my surprise he told me that he had recommenced the regular use of this drug six weeks after admission, which corresponded to the date when the improvement commenced.

I then sanctioned the use of the guaiacol, or rather replaced it by styracol, which I knew to be a combination of guaiacol and



cinnamic acid, free from some of the disadvantages of guaiacol, and I was pleased to find that the patient continued to make progress as long as he remained in my sanatorium. He never again suffered from diarrhœa, but he eventually made a good recovery, is now married and in good health.

This case led me to employ guaiacol, chiefly in the form of styracol, in a number of instances, almost always with encouraging results; but owing to the unpleasantness of the creosote-like flavour of guaiacol and to the tastelessness of styracol, and the fact that the latter only splits up into its components, guaiacol and cinnamic acid, when it has passed through the pylorus, I soon came to favour styracol, and to discard the use of guaiacol.

In all cases in which I suspected intestinal tuberculosis, or in which there was anything more than accidental diarrhœa, I administered styracol, and nearly always with advantage.

I also employed it in cases in which there was much cough, expectoration, or moisture in the lung, and I generally found these conditions were improved by its use.

In one instance, a patient suffering from a very large cavity occupying a considerable portion of the upper lobe of the right lung, was troubled with an extremely offensive expectoration, and a fœtor of breath which I was quite unable to assuage. The administration of styracol, however, eventually succeeded in reducing these unpleasant conditions to a remarkable extent, and if the dosage was omitted for any length of time they soon returned, though not quite to the same extent as before.

I have never found any ill effects follow the exhibition of styracol, and I have found benefits which were quite in excess of those following the administration of guaiacol in similar cases. This may be attributable to the therapeutic effects of the cinnamic acid, which is one of the components of styracol.

I have employed styracol in the form of powder and that of tablets. In the latter case I always recommended patients to bite them into minute particles, in order to secure that they should not pass through the alimentary system unchanged. The act of masticating styracol is not unpleasant, as the tablets are practically tasteless.

In my opinion styracal is one of the best available intestinal antiseptics, and its continual exhibition seems to impregnate the organism with guaiacol, so that the beneficial influence of that drug upon lung tissue undergoing necrosis is exerted to the full.

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## Progress of the Medical Sciences.

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### MEDICINE.

**On the blood-glands as pathogenic factors in the production of diabetes.**—Lorand,<sup>1</sup> in a paper on this subject, points out that a certain antagonism exists between diabetes and tuberculosis in so far that tuberculous people rarely become diabetic or gouty, although diabetic patients may become tubercular. Conditions which are associated with thyroid deficiency seem to possess a certain immunity to gout and diabetes. Bayon, of Wurtzburg,<sup>2</sup> and de Querrain have carried out researches which show that in all grave infectious diseases the thyroid is in a condition termed by them "thyroiditis simplex." Roger and Garnier<sup>3</sup> had previously demonstrated the hypersecretion of the thyroid in infectious diseases, which hypersecretion in its turn might be followed by exhaustion. In many infectious diseases symptoms arise which indicate an increase in the function of the thyroid, such as hyperthermia, tachycardia, slight exophthalmos, perspiration, and occasionally diarrhoea and diuresis. Those who inherit a good working thyroid will have a greater immunity against infectious diseases than others. Children who become diabetic are, as a rule, of bright intelligence, a symptom attributed by the author to a condition of hyperthyroïdea, in contrast to the mental torpor met with in conditions of athyroïdea. The sexual glands are in close relationship with the other blood-glands, especially the thyroid, which frequently shows enlargement on overfunction, as in repeated pregnancy, prolonged lactation, &c. This overfunction may be followed by exhaustion leading to myxœdema. The islands of Langerhans, like the parathyroids and adrenals, also represent blood-glands. The ordinary secreting tissue of the pancreas may be destroyed by cirrhosis without any involvement of the islands, as in an example in the Vienna Pathological Institute, in which case there was no diabetes. The author, however, considers that the absence of any pathological change in the islands of Langerhans after death in cases of diabetes may be explained by defective functioning properties of the

<sup>1</sup> A. Lorand (Carlsbad), *Tr. Path. Soc. Lond.*, 1906, lviii. 1.

<sup>2</sup> *Wurzburger Abhandlungen*, 1904.

<sup>3</sup> *Presse m<sup>d.</sup>*, 1899.

cells, the nervous tract to the pancreas possibly being involved ; for, as he points out, Pawlow has demonstrated in the dog that there exists not only a psychic gastric juice, but also a psychic pancreatic juice. Sobolew found that in animals the islands diminish in size after the administration of rich carbohydrate food, a fact which may explain why diabetes may occur more readily in those who for a long time have been on carbohydrate diet. The various blood-glands stand in close relationship one with another, changes in one being followed by changes in others. In acromegaly diabetes is frequent. In this disease the author maintains that the thyroid is altered even more frequently than the hypophysis. The changes in the latter gland he regards as secondary to those in the former. He has shown that diabetes only occurs in those cases of acromegaly which show symptoms of hyperthyroidea. While on the one hand certain blood-glands are found degenerated in diabetes, on the other the extracts of other blood-glands may produce glycosuria or diabetes. Thus the injection of adrenal extract may produce considerable glycosuria. The extract of thyroid may produce even in a higher degree than adrenal extract considerable glycosuria, and even true diabetes. According to Naunyn, Van Noorden and Strauss, diabetes only follows in such cases where there is inherited predisposition. All the symptoms of the diabetes may, however, be produced by the administration of thyroid extract. In a patient suffering from acromegaly to whom the author administered thyroid tablets, glycosuria associated with the excretion of diacetic acid and acetone had existed for eight years. Before the administration of thyroid he had no glycosuria. There is an unusual tendency to alimentary glycosuria in ordinary cases of Graves's disease, although it is rare in those cases which are passing into a condition of myxœdema. In those cases in which diabetes has been noted in myxœdema it has apparently been produced by treatment with large doses of thyroid extract. The glycosuria of infectious diseases, and that after mental emotions, is probably related to the condition of hyperthyroidea set up in these states. Similarly, the increase of glycosuria during menstruation, and the lactosuria of lactation are also probably related to hyperthyroidea. Further, Hürthle has demonstrated that stagnation of bile causes an increase of thyroid colloid, and Gans, Finkler and Exuer have found glycosuria during biliary colic. It is an interesting fact that after thyroidectomy in the goat the milk becomes poor in sugar but rich in fats. The diminution of glycosuria before death in opium poisoning, its rarity in chronic tuberculosis and cancer the author attributes to a diminution of thyroid secretion in these conditions. There have been cases of diabetes in which the sugar has disappeared after the onset of tuberculosis. The author has observed enlargement of the

<sup>1</sup> *Deutsche med. Wchnschr.*, 1897, No. 12.

thyroid in cases of diabetes, although he does not regard this as necessarily proving overaction of the gland. On examining the thyroid of three dogs in the laboratory of Prof. Minskowsky, of Cologne, after removal of the pancreas, he found much enlargement of the vesicles and much colloid material. The changes in the thyroid of these dogs very much resembled the changes produced in the thyroids of fowls after meat feeding by Chalmers Watson.<sup>1</sup> In the early stages of Graves's disease similar changes are found in the thyroid. In Graves's disease the increased secretion constitutes a toxic agent, causing, as shown by Magnus-Levy, a decomposition of albuminous substances. This decomposition leads to the splitting off of the carbohydrate radicle, the existence of which in the albuminous molecule has been demonstrated by Pavy.<sup>2</sup>

If under these circumstances the pancreas happens to be in any way degenerate, sugar appears in the urine. As an example of this, in the wards of Van Noorden was a case of Graves's disease in which after a few years diabetes developed. After death calculi were found in the pancreatic duct, and the gland tissue itself was degenerated. The author concludes that there are two important factors in diabetes: (1) degeneration of the pancreas; (2) hyperactivity of the thyroid. If the pancreas alone is degenerated the diabetes will be a light one, as in the diabetes of old people due to arterio-sclerosis of the pancreas, without any corresponding hyperactivity of the thyroid, for, as pointed out by Victor Horsley, the thyroid undergoes degenerative changes in old age. In young people the diabetes is more severe, because their thyroids are in good working order. The author considers that antithyroidin serum is capable of diminishing glycosuria, though he does not advocate its use in advanced cases. Diabetes will more readily occur in persons who take much meat, especially if they take large quantities of carbohydrates. Chalmers Watson has recently shown experimentally that an increased activity of the thyroid follows a meat diet.

**The acetone bodies.**<sup>3</sup>—Diacetic acid is so readily decomposed into acetone and carbonic acid, that no satisfactory method has been devised of separating the acetone and diacetic acid quantitatively in the urine. B-oxybutyric acid can, however, be separately estimated. While small amounts of acetone may be found in the urine of comparatively healthy individuals, the excretion of B-oxybutyric acid and diacetic acid are invariably due to pathological conditions. According to Schwartz, as much as 70% of the acetone which is excreted in pathological states may be excreted by the breath, while Geelmuyden has estimated that 80—95% may be lost through the lungs. There

<sup>1</sup> *Lancet*, 1905, i. 347 *et seq.*    <sup>2</sup> Pavy, *Physiology of Carbohydrates*, 1894.

<sup>3</sup> "The Acetone Bodies: their Occurrence and Significance in Diabetes and other conditions," T. Stuart Hart, *Am. J. M. Sc.*, 1906, cxxxii.

is no constant ratio between the amount of acetone which is excreted by the kidneys and that excreted by the lungs. The acetone bodies are formed in considerable quantities in digestive disturbances and in febrile diseases. Certain drugs increase acetone production, including benzol, antipyrin, morphine and heroin. Nervous shock and excitement have been shown experimentally to lead to an increase of excretion of acetone bodies. An effort has been made, unsuccessfully however, to find out the particular organ of the body in which the acetone bodies are manufactured. In no organ, however, has acetone been found in larger amount than could be brought to it by the circulating blood. In the laboratory the acetone bodies have been derived from proteids, carbohydrates and fats. Almost certainly in the body an abnormal destruction of fat is the main source of acetone body formation. The amount of proteid destruction as represented by the output of nitrogen, phosphates and sulphates, and the amount of the acetone bodies excreted are not parallel either in diabetes or starvation. Magnus-Levy has reported a case in which there was a metabolism of 262 grammes of proteid in three days, and yet this patient excreted 342 grammes of B-oxybutyric acid in this period, which was more than could have been derived from the proteid. The withdrawal of carbohydrates from the diet of a normal man almost always results in an increase of acetone excretion, while the administration of carbohydrates has the opposite result. In some cases of diabetes the amount of B-oxybutyric acid varied directly with the amount of fat in the food. Large quantities of fat administered to healthy people in a mixed diet increase the excretion of acetone. An abnormal amount of acetonuria is not produced in starvation merely by diminishing the caloric value of the food. For example, a diet consisting of 1.4 litres of beer with 750 grammes of bread gave rise to no acetonuria. On the other hand, a pure proteid diet in a healthy man may cause considerable acetonuria, in which case the acetone is probably derived from the breaking down of the body fat. A pure fat diet may produce more acetonuria than starvation, the acetone in this case being derived both from the body and food fats. The amount of the acetone excretion depends to some extent on the character of the fat used. Addition of carbohydrate to any of the foregoing diets diminishes the acetone output. This reduction is exceedingly rapid, indicating that the first effect must be to furnish the conditions necessary for the complete oxidation of the acetone bodies at that time circulating in the blood. There is no parallelism between the excretion of sugar and the acetone bodies in diabetes. In this disease the main source of the acetone bodies is the imperfect metabolism of fat, which may be either the body or the food fat. As in health, the addition of carbohydrate to the diet generally results in a diminution of the acetone output, while its with-

drawal may increase the acetone excretion. However, in advanced cases there may be exceptions to this statement. Fat feeding appears to be a frequent cause of the increase of acetone bodies. Fever in the diabetic usually reduces the output of sugar, while it increases that of the acetone bodies. The loss of power of oxidation in the diabetic has been shown by Waldvogel, who injected B-oxybutyric acid subcutaneously in cases of mild diabetes, and found that the resulting acetonuria was considerably greater than in his control experiments in healthy men. In coma, while B-oxybutyric acid is always present, acetone and diacetic acid may be relatively diminished, and sugar may be absent. The author considers that diabetes should be regarded as a disease in which there is a failure of the organism not only to utilise carbohydrates, but also to utilise fats. He believes that the disorders of fat metabolism are more than a secondary result of the diabetic's inability to assimilate carbohydrates, and that there is a direct perversion of the metabolism of fat. From the therapeutical aspect, since nervous irritation, excitement, hunger and fever all favour the production of the acetone bodies, they should as far as possible be avoided. Similarly, general anæsthetics should be avoided, and, if absolutely necessary, the starvation before and after should be a minimum. The withdrawal of carbohydrates should be carried out gradually, and the amount of fat which can be used without setting up acetonuria should be carefully watched. In selecting fatty foods, those containing the higher fatty acids should be chosen, since those containing the lower acids increase more markedly the production of the acetone bodies. If in spite of these precautions diacetic acid and B-oxybutyric acid are found, we must resort to the administration of alkalis. Simon, of Carlsbad,<sup>1</sup> has met with success in removing acetonuria in three cases by giving Parmesan cheese in amounts up to 3½ ounces daily. He recommends this cheese in cases where the exclusion of fats, particularly butter, has been unsuccessful in relieving this condition.

J. R. CHARLES.

## SURGERY.

**Bier's method of treating tubercular joints by the production of passive hyperæmia** can hardly be described as a new subject, inasmuch as it has found a place in current text-books for the last ten years. But owing to the fact that the treatment was long and tedious, it was never received with much enthusiasm in this country, and it probably never received the trial that it deserved. But during the past year Professor Bier has communicated to the German Surgical Congress, and also to the

<sup>1</sup> "Treatment of Acetonuria of Diabetes by the Ingestion of Parmesan Cheese," *La Semaine méd.*, 1905, No. 36.

*Münchener medicinische Wochenschrift*,<sup>1</sup> a very much extended scope for this treatment, viz. to all forms of acute inflammation, and already in Germany and America other surgeons who have tried it declare that it is of very great value.

During the past thirty years the attention of surgeons has been so much occupied with the elaboration of the principles discovered by Lord Lister, and of the operations that these anti-septic principles have made possible, that every other method of treatment has been regarded as of little importance. The prevention of infection and of suppuration has claimed so much attention, that the treatment of infected or inflamed tissues has been very little thought of. Of course, nothing can ever supersede the importance of preventing infection and suppuration of tissues, but, nevertheless, such infection will always occur, and it is a matter of great importance if any method can cut short the process and minimise its evil results. Now this is what is claimed for the method of artificial hyperæmia. As opposed to the old anti-phlogistic school, who regarded all inflammation as bad and hurtful, Bier's view is that inflammation is the natural cure of infection, and therefore should be encouraged. But although the principle underlying its application to tubercular and to inflammatory cases is no doubt the same, the method of its application is so different in the two classes of case that it will simplify matters if they are described separately.

In the case of tubercular joints, artificial congestion has been applied successfully<sup>2</sup> to all except the hip. A rubber bandage is wound round the limb at as great a distance from the joint as possible, and over a layer of gauze. In the case of the shoulder, the bandage is kept in place by calico strips round the neck and round the chest. The amount of constriction to be applied is a matter of great importance. The arterial supply as estimated by the pulse should not be altered, but the veins so compressed that the return of blood is hindered, and a congestion occurs below the bandage. The temperature of the part should be raised and not diminished. The bandage remains in its place for one to two hours daily, and the treatment of a case of moderate severity occupies from four to six months. If the bandage be left on too long in these cases acute inflammation is apt to supervene, and suppuration occur, and it is very important to bear this in mind in distinguishing between the treatment of tubercular and acute inflammatory cases.

It is not the primary object of this paper to deal with the tubercular cases, but in order to give completeness to the subject it may be well to briefly mention some recent publications which indicate the results of passive congestion as applied for these

<sup>1</sup> *München. med. Wchnschr.*, 1905, lii. 201, 263, 318; also Bier's "Hyperæmie als Heilmittel," 1905.

<sup>2</sup> *Lancet*, 1905, i. 1091.

conditions. Habs<sup>1</sup> gives an account of 200 tubercular joint cases in which he used this method. Whilst all varieties of the disease may show improvement, yet he recognises certain well-marked differences in various groups of cases. Thus children react much better than adults. Mild chronic cases do better than acute ones. Cases of pure synovial disease, when there is no affection of the bones, are those in which the results of the congestive method are the best. The elbow, wrist, knee and ankle all give good results, but the shoulder has also been successfully dealt with. Now it is evident from these observations that Bier's method is of the greatest value in just those cases which would in any case be treated by expectant rather than operative measures. Therefore it is not so much a question of choosing between operation or passive hyperæmia, as of simply adding the congestive treatment to other methods of non-operative procedure. In the knee, however, although the cases may improve for a time, a large proportion ultimately require operation. In early cases of wrist and ankle disease the method is of particular value, because it is in these that mere immobilisation so often fails. In fact, Bier<sup>2</sup> recommends that in early cases the joints should not be kept at rest, but that passive movements, preferably carried out in a hot-water bath, should be regularly employed. Tubercular cases in which the skin is broken or in which there is any septic complication, are not suited for the treatment, for although artificial congestion is used both for septic and tubercular affections, it has to be applied in a different manner in each case, and therefore cannot be employed when the two conditions co-exist. Ullmann<sup>2</sup> reports three cases of tuberculous testes successfully treated by Bier's method. A rubber band was bound lightly round the base of the penis and scrotum for half to one hour daily. In these cases the tuberculous disease had infiltrated the skin, and in all of them the pain and discharge were lessened, and the tubercular infiltration became smaller and softer, whilst the patients gained in weight. One would like to know the further history of these cases. Polyak<sup>3</sup> has tried the method with most gratifying results for tuberculosis of the larynx. The rubber band is applied as low down in the neck as possible, but quite lightly so as not to cause any inconvenience to breathing. The relief of pain is said to be the first and most striking result, and is the safest criterion of the amount of good which is likely to be gained by persisting in the treatment.

But it is the application of artificial congestion to acute inflammatory lesions of all kinds, *e.g.* a whitlow, a carbuncle, osteomyelitis or suppurative mastoiditis, that constitutes the more recent chapter in the history of surgical progress. Bier himself

<sup>1</sup> *München. med. Wchnschr.*, 1903, l. 938; abstract in *Edinb. M. J.*, 1903, N.S., xiv. 359.

*Lancet*, 1905, ii. 1737.

<sup>3</sup> *Edinb. M. J.*, 1906, N.S., xx. 183.



began to apply his method in such cases as long ago as 1893, but it was only last year that his work was fully published, and his results corroborated by other observers.

In these cases the actual constricting agent is applied in the same way as above described, but it is allowed to remain in position for very much longer, that is to say for 20 to 22 hours out of the 24. For such a condition as a whitlow in the hand, the bandage is applied to the upper arm, for inflammation of the foot it is applied to the lower part of the thigh. Again, in striking contrast to the best conditions in tubercular cases is the fact that the more acute the inflammatory lesion is, the better result does the congestive treatment give. The pressure of the band should be very light, but soon after its application the limb becomes a fiery red, which spreads from the original focus right up to the bandage itself. Then, too, the whole becomes swollen and œdematous, and if any incisions exist they pour with serous exudation. The position of the bandage is changed every ten hours, and in the short intervals between the periods of constriction the limb is raised to favour absorption of the œdema.

As soon as the congestive reaction has set in the patient feels a great relief of pain, the pulse becomes slower and more regular, and the temperature falls. The temperature rises, however, between the periods of constriction, but this, which is marked at first, soon becomes much less, until in about three to six days a normal mean is maintained. If suppuration occurs the pus must be let out, but the incisions need not be so free as would ordinarily be the case. Of course, if septicæmia or pyæmia has already developed this treatment is of no avail, except in hastening the resolution of any particular focus. Cathcart<sup>1</sup> gives a summary of Bier's recent papers with some of his cases, and adds a number of his own personal observations at the Edinburgh Infirmary. The scope of the method is well shown by the following typical examples of large groups of cases.

*Suppression of commencing suppuration.*—On April 8th, 1904, the left wrist of a woman of 60, who had a septic wound of the breast, became inflamed, with a rigor and temperature rising to 103° F. Passive congestion applied for 20 hours daily cured the condition in three days, the pain, heat and raised temperature disappearing.

*Transformation of acute into cold abscess.*—This is a rare occurrence. A boy of 7 was admitted on July 28th with an acute abscess in the lower end of his thigh. An exploratory syringe drew off thick pus containing staphylococci. Under passive congestion the inflammation had gone by July 30th, and the raised temperature fell to normal. The abscess remained as a cold, fluctuating swelling. On August 5th a 1 c.m. long incision was made into it, and the pus pressed out without further opening. It healed by August 9th. This transformation of acute into

<sup>1</sup> *Scottish M. and S. J.*, 1906, xviii. 302.

chronic abscesses is not, however, to be waited for or expected as a routine. It is better to open abscesses at the time the congestion is first applied.

*Suppurating surfaces.*—In these the pus at first becomes more abundant, but thinner. Very shortly the pus ceases, sloughs are thrown off, and other parts recover which would have necrosed under ordinary treatment. And the suppurating process becomes definitely limited, instead of spreading. Inflamed joints and all kinds of arthritis have been successfully treated, but the more acute cases seem to show more brilliant results than the chronic ones, e.g. osteoarthritis. In joints containing pus only a diagnostic puncture is made, but the joint is neither opened nor drained. The part is kept at rest, but the joint is not immobilised, but, on the contrary, is subjected to gentle passive movement as soon as the passive congestion has produced a cessation of pain. A man of 18 was admitted seventeen days after a septic wound which had penetrated the left elbow-joint. The joint was red, swollen, painful, and fixed at a right angle, and pus could be squeezed plentifully from the wound. In three weeks' congestive treatment the joint had recovered and the fistula healed. Within another month he had a freely movable joint. A man aged 20 was admitted with acute suppuration in his right knee, the origin of which was unknown. All the typical signs of acute suppurative arthritis were present, including rigor and a high temperature. The syringe withdrew pus containing living staphylococci. After twelve days' treatment the temperature was normal, the swelling was less, the pain had ceased, and the patient could flex his knee to a right angle. The fluid in the knee was now turbid serum. He recovered the complete use of the knee-joint, so that he was taken as ward attendant at the clinic.

*Suppuration in tendon sheaths.*—In these cases it is important to make incisions directly pus is formed, but these need only be stab incisions, and no packing or draining is required. Pus pours from them readily enough when congestion is applied. A butcher of 43 had a wound of the little finger which had infected the tendon sheaths and cellular tissue up to the elbow with acute lymphangitis. Temperature was 102.1° F., and he was very ill. After four days' treatment all the local inflammation had gone, the temperature was normal, and after a few tendon sloughs had escaped the wounds healed, and he had good use in his hand except for a little stiffness of the finger. Out of 22 cases of tendon sheath suppuration, 14 recovered without sloughing. And the extraordinary and almost incredible rapidity of the cures are in marked contrast to the tedious course of such cases when treated by the old methods.

*Acute osteomyelitis.*—Bier has had 14 cases of acute osteomyelitis, of which 6 recovered with no necrosis, 5 with very little necrosis, 2 with extensive necrosis, and 1 died of pyæmia.

*Gonorrhœal arthritis*.—A married woman of 38, who had been infected with gonorrhœa some time previously, was attacked by typical acute arthritis of the right knee-joint. For a month rest, extension, fomentation and drugs were tried without avail, but within fifteen minutes of the application of the rubber bandage to the thigh the pain was easier, and in a few weeks she was able to walk about with a somewhat stiff knee.

Of course, in many cases disappointment follows the method, as in these it proves inefficacious, but if carefully applied to suitable cases it does not do harm, and with practice and experience its scope will greatly increase.

Besides the elastic bandage, various kinds of suction apparatus may be used, and Dr. Klapp, Professor Bier's assistant, has devised a number for use in different positions of the body. For example, in the case of acute mastoid disease a suction cup may be placed over the mastoid region, in addition to or instead of a band round the neck.<sup>1</sup> Bier states that if this is done, only a small puncture into the mastoid antrum is necessary, and the case quickly recovers with good functional results in 60 per cent. of his cases. Polyák<sup>2</sup> has used a suction cup for tonsillar and pharyngeal inflammation, but finds that a band low down in the neck will give great relief to such diverse conditions as nasal catarrh, pharyngitis, maxillary suppuration, or laryngitis. Rudolph<sup>3</sup> has devised a suction apparatus which can be applied to the cervix for inflammatory conditions of the uterus, and he reports very good results from its use.

Whilst the majority of observers are agreed as to the wonderful results obtained by passive congestion, yet there are some who have not had such good results. Bardenheuer, who is now a firm believer in the method, had very bad results from it until he was instructed in its method of application by one of Bier's assistants. Lexer<sup>4</sup> declares it to be merely "a game of chance" as to whether the inflammatory processes will be checked or spread by its use, and he states that he has found that it produces an extension rather than a limitation of suppuration in cases where the parts are unopened. But if incisions are made first, then even this observer admits the great value of the congestion. Stettiner<sup>5</sup> points out how suppurating cavities and sinuses with small mouths may be made to heal without enlargement by suction hyperæmia. This is of great value in treating abdominal fistulas or stitch abscesses. Sick<sup>6</sup> remarks, and other observers, including Bier himself, agree with him, that there are certain well-marked groups of cases in which the treatment should not be applied, because in them it is likely to do positive harm. These are:—Rapidly-spreading strepto-

<sup>1</sup> *Ann. Surg.*, 1906, xlv. 729.      <sup>2</sup> *Loc. cit.*

<sup>3</sup> *Centralbl. f. Gynäk.*, 1905, xxix. 1185.      <sup>4</sup> *Ann. Surg.*, 1906, xlv. 731.

<sup>5</sup> *Ibid.*, p. 734.      <sup>6</sup> *Ibid.*, p. 730.

coccal infections, including erysipelas, inflammatory lesions in diabetes, varicose or congestive ulcers, and thrombo-phlebitis.

As to the mode of action of this treatment, we know little or nothing. The very rapid relief of pain, occurring generally in a few minutes to half an hour, must have a mechanical explanation, and Bier suggests that it is due to anæsthesia produced by the rapid œdema. The great effusion from the vessels of the part must flood the inflamed tissues with serum, leucocytes and opsonins, and it is possible that in this manner the invasion by micro-organisms is overcome. But in inflammation which results from chemical irritants the method is equally successful. It is of value in this connection to note the experiments of Perthes,<sup>1</sup> who injected strychnine solutions into animals' limbs, and found that by the use of a constricting band the supervention of toxic symptoms could be prevented, or so much delayed that the animal would survive a dose which would have killed it if it had been delivered into the free circulation. At any rate, it is impossible to rise from a perusal of the recent writings on this subject by so many different authors without feeling that a great addition has been made to our methods of treating common forms of disease. And it certainly involves the necessity of our making a personal study of the question, so that our patients may not be deprived of what may be a most valuable aid to recovery.

E. W. HEY GROVES.

## PATHOLOGY.

The Pathology of to-day falls easily into three great divisions—morbid anatomy, bacteriology, and chemical pathology. The morbid anatomist is the one faithful to old traditions, belonging to the cave-dwellers who see things dimly while lingering over the minutæ of dead bones and tissues; the bacteriologist is the adventurer who leaves old memories behind and soars into the unknown ether on the gossamer wings of Ehrlichism; the pathological chemist is the pacemaker who, while unravelling the constitution of substances, provides the necessary armament for the morbid anatomist and the chemical details for the bacteriologist. May a fourth class be added—the clinical pathologist, that *rara avis* who sometimes exchanges the coat of the laboratory for the plumes of the consultant!

*Convulsions.*—McIlraith<sup>2</sup> has just concluded an examination of 250 cases of convulsions occurring in infancy and childhood. He finds that predisposing causes play a more important part than do the exciting causes. The chief predisposing causes are "an inherited neurotic taint," and rickets. The chief exciting causes are those connected with gastro-intestinal disorders. Convulsions are by no means as frequent as generally supposed

<sup>1</sup> *Ibid.*, p. 732.

<sup>2</sup> *Medical Chronicle*, 1906-7.

at the onset of acute fevers, such as measles and pneumonia. They are more common at the onset of pneumonia than at the onset of measles.

In children suffering from convulsions there is frequently a history of ill-health or disease in the parents, especially in the mother during pregnancy, and this acts by lowering the vitality of the child and rendering it more liable to disease.

Only in a very small proportion of cases convulsions can be ascribed to injury at birth, or to organic disease of the brain. In early life convulsions may be the first sign of epilepsy, or may give rise to that condition in later life, but distinct epilepsy is more likely to supervene when there is no obvious cause for the early convulsive attacks.

Dentition is rarely a cause of convulsions, and only when some predisposing cause exists. *Cherchez l'intestin* appears to be a golden rule for infantile convulsions.

*Tumours.*—Among the countless hypotheses which, like the many airships, rise only to fall again, the relation of trauma to the site and ætiology of sarcomatous changes has been strongly advocated by a number of recent writers. "*Ohne trauma, ohne sarcoma*" is the utterance of one enthusiast. Many clinicians could cite cases which appear to support this contention. The point of view depends on the interpretation of the word "trauma." Hardly a day passes without the occurrence of knocks—physical or mental—and imagination frequently aids the note-taker. Nevertheless, though the idea will rapidly receive its quietus from writers sufficiently vigorous to talk it down, yet there is much in it. Incidentally, Sternberg has just published his work on *Trauma in Internal Diseases*, and we are again reminded that pathological changes are not concluded when the scar tissue covers over the external wound. Whether it be lung, liver, kidney, or bones, the seat of once damaged tissues must always be regarded with suspicion. There is ever the possibility of growth, or malnutrition, to think of in connection with an injury.

*Fæces.*<sup>1</sup>—The clinician looks always at the fæces—preferably through a telescope or the glass wall of a closed vessel—and his assiduity is sometimes rewarded by the observation of unusual appearances. Diagnosis may frequently be assisted by more systematic investigations. Here are a few points culled from several recent papers on the subject.

The insufficiency of the functions of the stomach are best gauged by the amount of connective tissue in the fæces.

The extent of the deficiency of pancreatic digestion may be determined by the amount of nuclein in the fæces. This should be supplemented by estimations of the fat, but in itself is a very useful sign.

Pancreon is a preparation of pancreas tissue. If steatorrhœa

<sup>1</sup> *Centralbl. f. Allg. Path.*, 1906.

or azotorrhœa disappear after its administration, then it is probable that pancreatic functions are suspended.

*Tuberculosis.*—Many recent works<sup>1</sup> have been directed to the paths of the infection in tuberculosis. It is declared that the chief avenues are via the bronchi by inhalation, and the pharynx by swallowing. The tubercle bacilli readily passes through mucous membranes without leaving any evidence of its passage.

Schlossman affirms that tuberculosis is, in the greater number of cases, a disease of childhood. Infection may occur by means of tuberculous food, but this is a rare occurrence compared with that of infection from man. The child inhales air containing tubercle bacilli, or touches infected material with the finger, and, placing the latter in the mouth, is thereby contaminated. As many as fifty per cent. of adults show signs of tuberculosis before they are fully developed. The mortality amongst children is very great, and the fight against infection of children through parents and relations is a field which offers a prospect of great success in not only reducing the child mortality from tuberculosis, but also in reducing the numbers of those adults whose latent, oft-times unsuspected tuberculous conditions are a source of danger to the community, as well as a death-warrant to themselves.

I. WALKER HALL.

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## Reviews of Books.

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### **A Guide to Diseases of the Nose and Throat, and their Treatment.**

By CHARLES A. PARKER, F.R.C.S. Edin. Pp. xiv., 624.  
Illustrated. Edwin Arnold. 1906.

A very practical exposition of diseases of the nose and throat, and their treatment by methods advocated at the Golden Square Throat Hospital, founded on lectures delivered at that hospital, has been written by a surgeon whose experience enables him to speak with authority, and this volume is sure to prove very valuable to all practitioners and students. It is clearly written, well illustrated, and well printed, although amongst the illustrations many will be recognised as old acquaintances, and some are distinctly poor, and not worthy of a modern text-book. Throughout the book the numerous formulæ for local pigments, sprays and applications will be found of service in practice. The very clear and detailed description of most of the technical methods now very frequently adopted by English laryngologists must prove helpful to those whose earlier studies of the speciality require to be kept abreast of the times, and hardly any page can be read by such without gleaning some point of value.

<sup>1</sup> "Reports of Hague Congress for Tuberculosis," 1906, in *Centralbl. f. Allge. Path.*, 1906.

**Indications for Operation in Disease of the Internal Organs.**

By Professor HERMANN SCHLESINGER, M.D. Authorised English Translation by KEITH W. MONSARRAT, M.B., F.R.C.S. Pp. xv., 498. Bristol: John Wright and Co. 1906.

This book is written essentially for the practitioner, in order to enable those who are not in hospital practice to arrive at an independent opinion on the advisability of operation in cases of internal lesion. In each chapter there are remarks on etiology, pathological anatomy, clinical course, diagnosis, and differential diagnosis, to give a general grasp of the condition under consideration, and a small selection from the literature is also added at the end of each chapter.

Being written by a physician, it is the more valuable from the surgical point of view; for though the writer is clearly in sympathy with surgical methods under the circumstances defined in the various chapters, he is nevertheless guided by a clear judgment in recommending operation only in such conditions as have failed to respond to medical treatment, or are clearly unsuitable for it. The statements are concise, and the end in view is clearly and definitely stated. We consider it a most useful book for those in general practice who are often in doubt as to the necessity of calling in a surgeon.

A word of praise and thanks must also be accorded to the translator, who has so ably put into English a work which it is highly desirable should be possessed by many who have not a sufficient knowledge of German to read the original.

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**Syphilology and Venereal Disease.** By C. F. MARSHALL, M.D., M.Sc., F.R.C.S. Pp. x., 509. London: Baillière, Tindall and Cox. 1906.

Dr. Marshall's book on syphilis is one of the most valuable monographs that has appeared of recent years. Inspired avowedly by the discovery of the *spirochæta pallida* by Schaudinn and Hoffmann in 1905, and accepting under reserve their claim for this as the specific organism of the disease, yet so complete is the study of syphilis in all its bearings, that were the part played by the spirochæta proved to be something less than at present appears likely, still Marshall's work must remain a very valuable landmark in the field of scientific literature. The inclusion of a complete bibliography of classical and modern authorities stamps the book as indispensable to the scientific investigator, while the concise and exhaustive description of syphilis from every standpoint is set out with such impartial judgment and wealth of detail that no practitioner can afford to leave the book unread.

The subject is one that intrudes itself into every malady;

and the effects of syphilis, its relationships, whether clinical, psychological or sociological, in the individual or the species are of such overwhelming moment, that so helpful a contribution to our knowledge deserves from the critic nothing but commendation.

Although the modern developments of science are fully dealt with, the style in which they are expounded does not require any very extraordinary pathological knowledge to be appreciated by the reader: even one who is not in close touch with modern laboratory methods will find himself informed, not puzzled, by Dr. Marshall's chapters in this province.

The experimental work upon *inoculation* both in man and monkeys is adequately described, and throws fresh light on the infectivity of the disease, not only as regards the length of time during which the acquired form may remain communicable, but also as to the transmission of the inherited taint.

Marshall summarises the evidence in favour of the *spirochæta pallida* as the specific organism of syphilis thus:—

“1. It has been found almost constantly in the primary and secondary lesions whether ulcerated or not.

“2. It has also been found in the blood.

“3. The same parasite has been found in widely-separated countries.

“4. It has been found in the blood and viscera of the syphilitic fœtus.

“5. It has been found by Metchnikoff and Roux in the syphilitic lesions of monkeys inoculated both with human virus and virus from other syphilitic monkeys.

“6. It has not been found in man or monkeys apart from syphilitic lesions.”

The only one of Koch's postulates not complied with so far is that the *spirochæta pallida* has not yet been cultivated out of the body. But the other evidence certainly seems incontrovertible that this is actually the specific cause of syphilis.

Unfortunately, although this conclusion may be accepted, all efforts hitherto made to discover a method of preventing the infection by immunisation or treatment have been in vain.

Even hereditary syphilis has proved no protection against the acquisition of the disease in later life by the ordinary means of infection.

The *clinical manifestations* and *treatment* are described with a fulness to which we can only refer with admiration, in the hope that a closer study of the recent improvements in treatment may lead to their wider adoption and the ultimate removal of the reproach under which the medical profession at present (perhaps justly) lies, that in England syphilis is frequently untreated and always inadequately.

The so-called *parasyphilitic lesions*—that is, diseases which owe their origin to, but do not depend upon any pathological change characteristic of syphilis, occupy a very important place



in the book on account of the valuable researches of Mott, Ferrier, and others.

*Hereditary syphilis* and the proved possibility of transmission to the third generation form perhaps, together with the advances in pathology, the most interesting reading that Dr. Marshall affords. The summary of facts observed in connection with the inheritance of the disease is well worth quoting:—

“1. That the degenerative effects of syphilis are frequently transmitted to the third generation, and possibly further, only to die out with eventual sterility.

“2. That, although difficult to prove, the transmission of virulent hereditary syphilis to the next generation is possible, and depends chiefly on two factors, *time and treatment*. . . . The reason why such cases are not more common lies in the fact that comparatively few subjects marry while suffering from hereditary syphilis in an active state.

“3. That re-infection of a heredo-syphilitic genitor increases the virulence of the disease and its fatal effects on the offspring.

“4. That the two chief obstacles to actual proof of transmission to the third generation are the possible re-infection of the second generation and the possible intervention of another syphilitic genitor. . . . For although a child is obviously the offspring of its mother, paternal parentage is seldom capable of scientific proof.

“5. That the hereditary transmission of syphilis is one of the chief factors in physical, mental and moral degeneration.”

Hereditary syphilis is insisted upon as essentially contagious, and to belittle this fact is a dangerous doctrine.

Syphilis is described as the hereditary disease *par excellence*, its hereditary effects are more inevitable, more multiple, more diverse and more disastrous in their results on the progeny and the race than is the case in any other disease. It has, in fact, a more harmful influence on the species than on the individual. Dr. Marshall acknowledges his indebtedness to the teaching of Fournier and his disciples; we in turn must with no less gratitude confess to the debt which we owe to the English exponent of their doctrines.

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**An Introduction to the Study of Colour Phenomena.** By JOSEPH W. LOVIBOND. Pp. 48. London: E. and F. Spon. 1905.—This small volume is apparently an extension of the author's previous work on *The Measurement of Light and Colour Sensations*. To the former material has been added a new colour theory and a more elaborate system of colour nomenclature. With the description of the apparatus designed for measuring and recording colour sensation in quantitative terms the interest which the writer commands is exhausted. By the combination of single sensation colours (red, yellow and blue)

in thin glass plates, the tint of which is arbitrarily regarded as a standard unit, varying depths of a particular colour and differing shades may be imitated. As an instance we may quote, two blue plus two red develop two units of violet; that is to say, white light transmitted through two thicknesses of the unit blue glass and the unit red produces two units of violet colour for purposes of merely empirical comparison; this is interesting, and may be useful. No scientific basis for his standard is suggested by Mr. Lovibond. As a practical method it is attractive in its simplicity. The author's analytical colour charts form an excellent means of recording in a simple form the results of investigations with his "tintometer," and the application of these charts to the hæmoglobinometer earned for him a medal at the St. Louis Exposition of 1904. When, however, the new colour theory is expounded we are at a loss to see any reason for substituting a clumsy "six-ray" theory for the accepted "three-ray," and the writer does not bring forward any arguments that make good his claim to the discovery of a simpler or more satisfactory explanation of colour phenomena. Nor do numerous highly-coloured, solid, geometrical figures make up for a total absence of all references to rates of vibration and wave-lengths in the production of varying colour sensations.

**Studies in Blood Pressure: Physiological and Clinical.** By GEORGE OLIVER, M.D. Pp. 151. London: H. K. Lewis. 1906.—These two lectures, on the physiological and clinical aspects of blood-pressure measurement, are likely to be of much service at a time when clinical hæmomanometric methods are engaging so much attention. This little book may be regarded as a text-book by one who has been the pioneer on the subject of hæmomanometry, and whose clinical observations are most trustworthy.

**Manual of Medicine.** By T. K. MONRO, M.D. Second Edition. Pp. xxii., 1022. London: Baillière, Tindall & Cox. 1906.—The second edition of this manual has been subjected to a thorough revision throughout, and a good deal of new matter added, bringing the volume thoroughly up to date. Additional illustrations have also been introduced. Although the work is longer than its predecessor, it is not unduly voluminous, and we have failed to find any omissions of importance.

**The Treatment of Diseases of the Digestive System.** By ROBERT SAUNDBY, M.D. Pp. viii., 133. London: Charles Griffin & Co., Ltd. 1906.—The most essential part of this booklet is the introduction, an essay of forty-one pages on the personal experience and views of a physician of large and mature experience on a subject on which many volumes have been and may still be written. The subsequent chapters on diseases of the œsophagus, stomach, intestine and rectum, are such as might be culled from any text-book. A short essay on

symptomatic diseases, and a long list of formulæ of the ordinary type complete the volume, which is not likely to enhance the reputation of its already distinguished author.

**Minor Maladies and their Treatment.** By LEONARD WILLIAMS, M.D. Pp. vii., 383. London: Baillière, Tindall & Cox. 1906.—This volume of 383 pages is a reprint from various sources of lectures given at the Medical Graduates' College and Polyclinic. They must have served a very useful purpose, and are quite worthy of reproduction in book form, inasmuch as much of the contents can only be learned by prolonged experience, and is not to be found in the text-books. The subjects are of everyday interest and utility, ranging from the common catarrh up to insanity, and many well-tryed formulæ are scattered through the text. These are at the present time of increasing use, inasmuch as few students learn the elements of prescribing, and are too prone to adopt the unscientific combinations of the manufacturing druggist, for whose benefit they are commonly made rather than for the patient.

**Uric Acid: Chemistry, Physiology and Pathology.** By FRANCIS H. MCCRUDDEN. New York: Hæber. 1906.—To an inquiry as to the time of publication of his masterpiece, an author humorously replied, "The head is on the perineum." Such a phrase could never have been applied to this book. True, it exhibits the traces of tedious labour, but there is not a spark of life within its pages, there is nothing which stimulates the mind or widens the imagination. It is a machine-made book pure and simple. To borrow a phrase from the greener isle, "It was killed at conception." For the preface, with engaging frankness, states that the publication is made because there is no complete and reliable account of the metabolism of uric acid to be found in one place. Completeness, reliability—life is short—are to compensate for vivacity, purpose, interest. But such a programme is too extensive for even machine-made books. Were one to be hypercritical, several errors in chronology and omissions of work could be pointed out. It is not necessary to do this, for with a book of this kind it is impossible to approach perfection. Do not, however, take our diatribe too seriously. Provided that it is necessary for anyone to refer to the uric acid literature, then this book will save much searching. In the States it even might assist spelling, and that is saying much for an American book. But as the practitioner does not care to search for literature since he receives the *Uric Acid Monthly*, without cost or intermission, and prefers to confine his spelling errors to his prescriptions, the book then hardly appeals to him. To whom then shall it be recommended? The physiologist, the pathologist, the librarian, the book lover, the collector for posterity? All these—poor souls in more senses than one—will rejoice over this triple essence of uric acid research and conjecture. Possession

will mean satisfaction—and, after all, what better does life provide? In this way the author may not have laboured in vain.

**On Retro-peritoneal Hernia.** By B. G. A. MOYNIHAN, M.S., F.R.C.S. Second Edition. Revised and in part rewritten by the Author and J. F. DOBSON, M.S., F.R.C.S. Pp. vi., 195. London: Baillière, Tindall & Cox. 1906.—Since the first edition of this work was published in 1899 a good deal of anatomical work has been done in this subject, which has been duly incorporated in the present edition. It is fully illustrated, and there is a complete bibliography of the different varieties of hernia met with in this region. The book is certainly one of the best accounts which we have in English on this serious affection.

**The Extra Pharmacopœia of Martindale and Westcott.** Revised by W. HARRISON MARTINDALE and W. WYNN WESTCOTT, M.B. Twelfth Edition. Pp. xxx., 1045. London: H. K. Lewis. 1906.—Nearly 250 pages of new matter have been added, and every care has been taken to make the work as complete as possible. The authors urge rightly that it is time that the practice which has grown up of burdening the prescriber with metric equivalents to grains, drachms, and ounces should be dropped in favour of metric terms only, which involve far less mental calculation, and hence involve very much less likelihood of error. They also urge that it would be of general advantage if the English term minim were abandoned: a drop might be considered as  $\frac{1}{20}$  of a cubic centimetre, or about  $\frac{1}{7}$  of a minim.

**The Care of Children.** By ROBERT J. BLACKHAM, Capt. R.A.M.C. Revised and enlarged edition. Pp. xi., 84. London: Scientific Press, Ltd. 1906.—Truly the times have changed from those when Kingsley could describe the army doctor as one who thought a baby's inside much the same as that of a Scotch guardsman. This excellent little book is written with a view of helping to educate mothers and nurses in the simple but essential principles of infant hygiene, by one who has been impressed with the extremely disastrous results which are occurring all over this country owing to the well-nigh universal ignorance of the populace concerning this subject. Captain Blackham, who writes from the Military Families' Hospital, Devonport, has evidently a very practical knowledge of his subject. He does not preach any new doctrines, but merely sets down in clear and convenient form the accepted teaching on infant feeding, clothing and general hygiene. The book seems sound in every respect, and carefully prepared to meet a very real want. We trust it may have a wide circulation among those for whose use it has been written, and may help to diminish the terrible infant mortality rate about which so much is talked, though comparatively little is done to diminish it.

## Editorial Notes.

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**University College**  
**Colston Society.**

THE annual meeting of this Society, held on January 11th, under the presidency of Sir William Selby Church, Bart., K.C.B., gave another opportunity for setting forth the claims of the city for the establishment of a Bristol University. The occasion was a notable one, inasmuch as the Lord Mayor of London (Sir William P. Treloar) was entertained as a guest, and, further, it was the first occasion on which the Master of the Society of Merchant Venturers had been present. The Lord Mayor of Bristol and the Sheriff were present, also the Vice-Chancellor of the University of Oxford, the Bishop of Hereford, the Right Hon. Henry Hobhouse, and Sir William R. Anson, Bart., M.P., and many distinguished citizens. The President spoke of Edward Colston's association with St. Bartholomew's Hospital, to which he had been a generous benefactor, and then gave some details of the early history of the Bristol Medical School, and of the distinguished men who had been associated with it, and he trusted that the spirit of Edward Colston might still operate in our midst in furtherance of the establishment of a University for the West of England.

Mr. Henry Hobhouse spoke of the value and need of local Universities, free from the trammels of compulsory Greek, to concentrate their attention on the scientific and modern training, but, he hoped, on the classical side, always ready to seek and obtain aid and inspiration from their older sisters. He spoke of the distinguished career of Sir William Anson, and said it was the fashion in these days to decry University representation. He thought it was a sufficient answer to point to the fact that during the last ten years the Universities had sent to the House of Commons five such men as Lecky, Lubbock, Michael Foster, Jebb, and Anson.

Sir William R. Anson, M.P., dealt with the question of the value of University Colleges under the present educational conditions.

The Vice-Chancellor of the University of Oxford (T. Herbert Warren) admitted that he was a convert to the idea of local and civic Universities. At first he thought it was a pity and a danger to multiply Universities, but he had come to see that that was by no means the case, and that they must bring Universities home to the doors of the people in the large gatherings of population in the great cities. He advocated a University in Bristol for two reasons—because he thought Bristol was the right place for it, and that it would do good to Bristol. They ought to have a University of their own in Bristol, because Bristol was a most admirably-situated place. With its surroundings, the historic associations, the poetry, so to speak, mingling with the prose of commercial prosperity, it was a place filled with opportunities for the education and elevation of the mind, apart from its geographical position. He thought that Bristol might fairly claim to be the next University College to take the rank of a University.

Principal Lloyd Morgan said they looked forward to the time when Bristol would not lightly let distinguished men leave her. They had lost good men in the past, but he hoped they would learn more and more to secure the services of men who came to work with them. At present the College was placed in a difficult position, and he had often been told in America that the position in Bristol was almost impossible. They were preparing students for examinations in which they had no voice, and over which they had no control. The aim and object of education was to bring the individual into vital touch with his environment—into practical touch with his environment. Alluding to the work of the future Bristol University, the speaker pointed out that Bristol was in the midst of agricultural districts. In developing the subject of agriculture, they proposed to have as a beginning one or two professors who were strong both on the scientific and the practical side, and who would be ready to place their knowledge at the disposal of all those interested in the question in the West of England. They would have a strong advisory board, and had been promised the assistance of distinguished experts.

**The  
University Ideal.**

PROFESSOR G. H. LEONARD, speaking, February 4th, on "The University Ideal, a chapter from *Mediæval History*," remarked that, in reference to the prospects of a University for Bristol, one of the greatest things that University would have to do would be to train the imagination of man. Imagination, however, must have something whereon to build, and it was his object to tell, as simply as he could, what a University was, what the Universities of England and Europe had been. The scholar wanted the master, and he found at the University, not only the master, but other students, and the mind was thus sharpened by contact with other minds. In Bristol the University College had always given a cordial welcome to foreigners, the Frenchmen, Germans, and Dutch, and those who hailed from more distant parts and made their home amongst them for the time. He hoped these foreigners would learn something from us, and he wanted them to realise that much was to be learned from them. Many in Bristol believed the University of Bristol, with a colour and character of its own, would attract many foreigners to our city, who would come here, it might be, to study commercial geography, agriculture, literature, or some special school of medicine they would make their own.

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**Prof. Sadler  
on a University  
for Bristol.**

AT the annual distribution of prizes to the students of the Merchant Venturers Technical College, on December 21st, 1906, Professor Michael E. Sadler made a powerful appeal on behalf of a University for Bristol. In the course of his address he remarked that the characteristics of all the new Universities in England were these. Each had one centre for its work. The federal system, by which a University was, so to speak, like a three-legged stool, was, so far as our country was concerned, practically given up. They got more life, more vigour, more municipal pride, more local character if they had a University representing one great city. It was, secondly, characteristic of all those Universities that

the examinations should follow the teaching, instead of the teaching being subservient to the examinations, and there was the wise provision by which there was an external and independent examiner. The third characteristic was that they regarded provision for research as absolutely indispensable for the educational vitality of the institution. No teacher could teach properly unless he himself was going on learning. The fourth characteristic was that the Universities were open, without let or hindrance, to men and women of all ranks and all sorts, and, so far as their resources permitted, they would teach anything which the locality thought it was desirable to have taught, and not only in the daytime. One of the great problems we had to face in this country was to enable men who had entered work to take their degree by a systematic series of evening courses. It was a difficult work, because they could not work a competent teacher by day and night ; but it was a problem we had to face and to solve. In this connection he could not but recall to their recollection that in that city, unless he was mistaken, were the first beginnings of that adult school movement, more than one hundred years ago, which, for his own part, he regarded, through its spirit of brotherliness and common service, as perhaps the most remarkable of all the educational movements of our time in this country. But large resources were indispensable to a modern University, and the one thing which made him hesitate in laying this suggestion before them was that he could not disguise from them the fact that year by year the efficiency and maintenance of a great University became more and more expensive. The country would not gain by the establishment of Universities, weak because ill endowed and ill equipped with the right kind of teachers, or with the necessary laboratories and libraries and other buildings which the social life of a great University required. If they took a survey of University life, they realised how elastic things were. They might practically build a University according to the local need, and adjust its organisation to the different requirements of the different districts, but it was highly important, where possible, to unite in one institution the component parts of their University.



Union was good for administrative purposes ; it was good for the interchange of thought between student and teacher ; it was good for the discipline—a much more important part of modern University life than was generally realised ; and it was good for future growth, because a single institution appealed more to the imagination, to the State, to the locality, and to the good wishes of the intending benefactor. They wanted one Council, one professional Senate, one academic head. But under these circumstances variety was possible within wide limits. As, for example, at Sheffield, where the Technical College, though an integral part of the University, had its own special traditions and its own history. A great University in Bristol would be the crown of the educational system of the city and district. What we had learnt in the last few years in England had been that national education was one thing from top to bottom with good primary schools, first-rate secondary schools, and great Universities, and, through their reciprocal influence and need, indispensable the one to the other. A University here, well endowed, would furnish Bristol and its neighbourhood with a succession of men fitted to hold the most responsible posts in the scientific enterprise and organisation of modern industry and commerce. And the rapid growth of Bristol encouraged the hope that its citizens would ere long emulate the example of Manchester, Liverpool, Birmingham, Leeds, and Sheffield, and other great cities in building up a modern University. The intellectual influence of a University here would make Bristol, as it used to be in old days, the lantern of the west. The great historical part of Bristol, and of the West Country, would be an inspiring influence in the work of its University. As Burke—perhaps the greatest name connected with Bristol—said, “ Our country is an ancient tradition into which we are born.” It was our business to blend the old with the new, and a University was one of the centres in which that work could be carried on. And, apart from its intellectual resources, each great city University ought to have halls of residence, in order that the students might enjoy the characteristic benefit of English academic tradition, namely the social training which one got from the give and take on

equal terms of collegiate life. And our aim should be to give the rising generation of Englishmen and Englishwomen the best possible opportunity of physical and intellectual training that the world could offer—something which would strengthen and deepen character and fortify will. And we could aim at nothing higher than that the outcome of our education should be fairness of mind combined with capacity for decisive action.

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**Sir  
Michael Foster.**

THE scientific world has sustained a great loss in the death of Sir Michael Foster, K.C.B., F.R.S., D.C.L., M.D. Lond. He possessed a vigorous personality, and as Professor of Physiology at Cambridge for twenty years has exercised a vast influence over the science which has become so completely transformed since the time of Bowman and Carpenter. The scientific development of Physiology in this country has been mainly due to Foster and his pupils, and the University of Cambridge and the Royal Society owe much of their present prestige to the mind and work of the late Member for the University of London. The following personal reminiscences have not been in print elsewhere, and are worthy of record:—

An archæological friend writes: "I well remember a pleasant midsummer day at Cambridge, some years ago, spent in the company of Professor Michael Foster, on the invitation of an intimate friend of his. He met us at the station, and devoted the whole day to showing us the colleges; he did not seem to care much for the antiquities of the place, and rather treated the subject with subdued scorn. Pointing to the saints in the windows, he said, 'Perhaps they will have me up there one day.'

"At that time he held strong radical views, which he rather impressed on me by saying, with reference to the old saying, 'Whatever is, is right;' but I say, 'Whatever is, is wrong.' I was much struck with his genial humour, giving way now and again to peals of laughter.

"After dinner he sent his man to row us on the Cam. He told me that he had been with the Professor for many years,

his duty being to anæsthetise the animals for vivisection. He never knew one single case of an animal being allowed to suffer pain, for the animal was always unconscious before the operation began, and was always despatched before it could recover consciousness."

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**Cerebro-spinal  
Fever.**

THE spread of the mysterious and fatal malady known incorrectly as "spotted fever" is causing considerable alarm. Professor Osler states that in New York there have been nearly four thousand cases within the last two years, and that as many as three thousand have been fatal. The necessity for anticipating precautions of comprehensive character is never more evident than in the case of the possible invasion of a district by a comparatively unknown disease. Hence we have endeavoured to give a brief outline of what is known of the disease in an article (page 14) compiled by the Medical Officer of Health for Bristol in conjunction with the Pathologist to the Bristol Royal Infirmary, describing some of the latest known of the salient points in regard to the causation, prophylaxis, and treatment of this disease, and it is hoped that by united action on the part of the profession and of the public authorities, any introduction of cerebro-spinal fever in epidemic form may be promptly averted or checked.

Meantime the name of the disease is of some importance. The term cerebro-spinal meningitis is too comprehensive, inasmuch as it includes all forms of meningitis. The term spotted fever was formerly used as synonymous with typhus, and should still be retained for this disease, in which petechial spots are always present, rather than for a disease in which they are commonly absent. It seems more than likely that many of the earlier epidemics of so-called spotted fever may have been really typhus. Although we rarely see typhus fever now, its name, spotted fever, should not be attached to a malady of which the pathology and bacteriology are totally different.

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**Pathogenic  
Organisms.**

WITHIN the last few months a considerable amount of work has been done upon the metabolic reactions of staphylo-, strepto- and diplococci. The results attained appear to have a practical bearing upon the diagnosis and treatment of infectious conditions, and we hope to present a résumé of the researches and their applications in our next issue.

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## Notes on Preparations for the Sick.

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**Colalin ; Colalin Laxative.**—T. MORSON & SON, London.—These two preparations are in tablet form, the dose of colalin being half a grain, one tablet to be taken three or four times a day. It is considered to be pure cholalic acid, an amorphous powder, insoluble in the stomach, but soluble in the upper intestines, from whence it is absorbed, as no traces of cholalin are found in the fæces. It is believed to stimulate the liver and cause an increased flow of bile.

The laxative tablet contains a combination of cholalin with the anthraquinone principle of cascara. These bile preparations are said to be of genuine therapeutic value in cases of functional affections of the liver ; the promoters of them state that they may be absolutely relied upon to stimulate the flow of bile, and more especially to convert an abnormal viscous bile into a normal and viscid one. In one case the effect of this tablet on the bowels was found to be insignificant.

**Liquid Somatose.**—BAYER CO. LIMITED, 19 St. Dunstan's Hill, London, E.C.—This preparation is introduced for the convenience of those who find the powdered somatose troublesome to dissolve. The nutrient properties are mainly due to the presence of proteoses and alkali albumen ; the unsweetened solution gives no precipitate on boiling, but a dense precipitate on addition of an acid, which completely disappears on heating, and reappears on cooling. The biuret reaction gives a pink colour, with dilute solutions. There are two varieties of Liquid Somatose, a sweetened and unsweetened, the latter being available for diabetics, and the former recommended for children. Both are quite palatable, and the former may be added to soup or beef-tea without spoiling the flavour of these dishes.

**Formamint Tablets.**—A. WULFING & CO, 83 Upper Thames Street, London.—Formamint is a chemical combination of formic

aldehyde with lactose. The tablets dissolve readily in the mouth; they produce an abundant flow of saliva, which, containing formic aldehyde, has an effective antiseptic action in the throat. They are considered to be the best substitute for gargles, and as they are to be dissolved slowly in the mouth, their action is likely to be much more prolonged. They are quite palatable and non-irritating, so that they may be readily taken by children, and should be effective in all cases of sore throat when a non-irritating antiseptic is desirable.

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**Tabloids: Guaiacol Camphorate**, gr. v.; **Calcium Lactate**, gr. v.; **Pectoral Pastilles**.—BURROUGHS, WELLCOME & OO., London.—The Guaiacol Camphorate Tabloid should be a convenient form of administration of two useful drugs in cases of phthisis. The guaiacol has deservedly established a reputation, and in its combination with another drug also of established reputation, camphoric acid, its value should be greatly enhanced.

Calcium Lactate is employed to increase blood coagulability, which has been shown to be deficient in cases of urticaria and other affections. Its administration has proved successful in the treatment of urticaria, chilblains, certain forms of albuminuria, headache, and serum rashes. It is also employed in aneurism and in various forms of hemorrhage, including the hemorrhagic form of small-pox; as a preventive and curative in hæmophilia, in uterine hemorrhages, and preliminary to surgical procedure. "Tabloid" Calcium Lactate presents a convenient and satisfactory means of administering a calcium salt. Calcium Lactate is now preferred to the chloride, which has sometimes been found to produce disturbance of the alimentary canal. This tabloid is non-irritating, readily soluble and easily absorbed. One or more may be taken twice or thrice daily for two to three days.

"Tabloid" Pectoral Pastilles contain ammoniated liquorice, squill, tolu, senega, ipecacuanha, wild cherry, etc. They afford a palatable and convenient means of exhibiting aromatic, expectorant, demulcent and sedative principles. Slowly dissolved in the mouth, these pastilles exert a prolonged and uniform effect on the respiratory tract. They relieve cough, check excessive secretion, and soothe the irritated mucous membrane. They should be valuable in colds, hoarseness, and bronchial affections.

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**Phenofax**.—BURROUGHS, WELLCOME & CO., London.—This antiseptic surgical dressing contains 7 per cent. of pure phenol in a bland basis. It may be applied on lint, or may be used as an ointment in parasitic skin diseases. It is also suitable for application to affected mucous surfaces, more especially ulceration of the cervix uteri.

**Soloid—Eosin-azur.**—BURROUGHS, WELLCOME & Co., London.—We have examined this "Soloid." Each soloid contains 0.015 gm. of Giemsa's stain, and is dissolved in 5 c.c. of pure methyl alcohol. When the staining directions are properly followed, the results are thoroughly satisfactory. These "soloid" stains are most convenient for use, and are reliable as regards their staining properties.

### The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in December :

February 28th, 1907.

|  |         |            |
|--|---------|------------|
| J. Paul Bush, C.M.G. (1)   | .. .. . | 5 volumes. |
| Medical Officer of the London County Council (2)                   | .. .. . | 1 volume.  |
| Middlesex Hospital (3)   | .. .. . | 1 "        |
| The Pathological Society of London (4)                             | .. .. . | 2 volumes. |
| The Council of the Royal College of Physicians of London (5)       | .. .. . | 1 volume.  |
| Scholastic Trading Company (6)                                     | .. .. . | 1 "        |
| James Swain, M.D. (7)  | .. .. . | 1 "        |
| The Director of the U.S. Census Report (per W. Roger Williams) (8) | .. .. . | 2 volumes. |

Unbound periodicals have been received from Mr. Paul Bush and Dr. James Swain.

### SIXTY-THIRD LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

|  |  |              |
|--|--|--------------|
| <b>Bérard, A. Poncet et L.</b>   | <i>Traité clinique de l'Actinomycosis humaine</i>  | 1898         |
| <b>Buxton, D. W.</b>   | <i>Anæsthetics</i> .. .. .   | 4th Ed. 1907 |
| <i>Catalogue of Accessions to the Library of the Royal College of Physicians of London</i> .. .. . |  | (5) 1906     |
| <i>Catalogue of the Pathological Museum of the University of Manchester</i>                        |  | 1906         |
| <b>Catheart, C. W.</b>   | <i>The Essential Similarity of Tumours</i> .. .. .                                       | 1907         |
| <b>Clubbe, C. P. B.</b>  | <i>Intussusception</i> .. .. .   | 1907         |
| <i>Encyclopedia and Dictionary of Medicine and Surgery.</i> Vol. III. ..                           |  | 1907         |
| <b>Haab, O.</b>  | <i>Atlas of the External Diseases of the Eye</i> (Ed. by G. E. de Schweinitz) .. .. .    | 2nd Ed. 1906 |
| "  | <i>Atlas and Epitome of Operative Ophthalmology</i> (Ed. by G. E. de Schweinitz) .. .. . | 1905         |
| <b>Hartmann, H.</b>  | <i>Les Anastomoses intestinales</i> .. .. .  | (1) 1906     |
| <b>Hewitt, F. W.</b>   | <i>Anæsthetics and their Administration</i> ..   | 3rd Ed. 1907 |
| <b>Hurdon, H. A. Kelly and E.</b>  | <i>The Vermiform Appendix and its Diseases</i>   | 1905         |
| <b>Keetley, C. B.</b>  | <i>The Prevention of Cancer</i> .. .. .  | 1907         |

|                                    |  |      |
|------------------------------------|--|------|
| <b>Kelly and E. Hurdon, H. A.</b>  | <i>The Vermiform Appendix and its Diseases</i>   | 1905 |
| <b>Klein, E. . . .</b>             | <i>The Bacteriology and Etiology of Oriental Plague</i> . . .                                | 1906 |
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## MEETINGS OF SOCIETIES.

### Bristol Medico-Chirurgical Society.

December 12th, 1906.

Mr. JAMES TAYLOR, President, in the Chair.

Dr. E. C. WILLIAMS showed a **Case of Rheumatoid Arthritis** in a girl aged twelve.

Dr. B. M. H. ROGERS showed (1) A **Child of two years of age weighing only seven pounds**, and (2) A case of **Optic Neuritis of sudden onset**.

Dr. ROGERS also read notes of a case of **Narcolepsy**.—Dr. A. RENDLE SHORT compared *petit mal* and its persistence to the disease under consideration.—Dr. STACK said the condition suggested that induced by mesmerism, and asked if the pupil



had been contracted in the sleep or not. In the mesmeric state he thought the pupil was not contracted, though it was in somnambulism.—Dr. ROGERS replied that the sleep looked like ordinary sleep.

Mr. E. W. HEY GROVES read a paper on **A New Method of Fixation in Excision of the Knee-joint**. The apparatus devised and recommended by the speaker consisted of iron rods, which were passed from side to side through the femur and through the tibia. The projecting ends of these were braced together on each side by two more rods having screw ends. The apparatus fixed the bones immovably together. It was advisable to make a mortise and tenon junction of the femur and tibia. He had used the apparatus successfully in four cases.—Mr. J. LACY FIRTH said the difficulty in fixing the bones in this operation was greater in proportion to the youthfulness of the patient and the softness of the bones, and asked if the speaker's patients had been children or adolescents. He thought that the bones might rotate on the rods passed through them, though he had not actually tested the apparatus, especially if the bones were soft, as was often the case. He had found that steel pins, passed from the tibia into the femoral condyles, crossing one another as they passed from the outer tuberosity of the tibia to the inner condyle, and from the inner tuberosity to the outer condyle, were satisfactory, unless the bones were very soft.—Mr. GROVES replied that his apparatus could be screwed up, so that the femur and tibia were tightly braced together and could not move upon each other. None of the patients had been very young, and three of them twenty years of age or more.

Dr. E. C. WILLIAMS read the concluding notes on a case of **Spleno-megalic Biliary Cirrhosis** (*vide* p. 43). The patient had been shown to the Society a year previously.—Dr. FORTESCUE-BRICKDALE showed the organs obtained at the *post-mortem* examination of the case, and microscopical sections.—Dr. MICHELL CLARKE, from an examination of the specimens, thought the case had not been one of biliary cirrhosis. The specimens looked more like those in ordinary cirrhosis of the liver. It was difficult to deny that the specimens were like those in Banti's disease. Intestinal poisons might cause cirrhosis as well as alcohol.—Dr. WALKER HALL said the microscopical specimens suggested Banti's disease. Some fissures on the right lobe of the liver suggested that the cirrhosis was syphilitic. The sections showed capsular and interlobular cirrhosis.—Dr. CAREY COOMBS thought the changes in the liver were the result of irritation, transmitted to the organ by the bile ducts, systemic arteries, or portal vein. There appeared to be no evidence that the bile ducts or the artery had been the channels of conduction. The cirrhosis was very like the alcoholic form, and the poison had probably come from the intestinal tract through the portal vein.—Dr. WILLIAMS,

in reply, said there might be no jaundice in the juvenile type of the disease. By Banti's disease was meant the terminal stage of splenic anæmia of adult type, in which affection the spleen was the first organ to be affected. The child was too young for that, the disease having begun at four years of age. The splenic anæmia of infants is a totally different disease. No results had been observed from anti-syphilitic treatment in the case. Salicylate of soda had done most good.

Dr. KENNETH WILLS read a paper on **Eighty Cases of Lupus Vulgaris treated by Radio-therapy.**

*January 9th, 1907.*

Mr. JAMES TAYLOR, President, in the Chair.

Dr. CHARLES read notes on a case of **Multiple Myelomata and Albumosuria.**—Mr. ROGER WILLIAMS pointed out that myelomatosis occurs without albumosuria. Albumosuria was not the disease, it was a secondary phenomenon. Such cases as that described were formerly called multiple sarcomata of bone. It seemed clear that the disease was not sarcomatous, and likely that it belonged to the leucæmic class of diseases, and, like those, was due to an infective agency. The disease had affinities with Paget's osteitis deformans.—Dr. MARKHAM SKERRITT pointed out that not much was known about albumosuria and its causation. It was sometimes met with in pneumonia. He had met with an example of albumosuria in a medical man which persisted for twelve months. Later serum-albumin was found in the urine, with signs of chronic interstitial nephritis. Ultimately the patient died of acute pneumonia.

Dr. MICHELL CLARKE read a paper on **Some Complications of Pneumonia.**—Dr. COOMBS referred to four cases of pneumococcic peritonitis of which he was cognisant. Three of them had been apparently primary. Of these, two children and one adult had recovered. It would be interesting to know whether the affection was more often primary or secondary.—Mr. CARWARDINE mentioned a case of diplococcic peritonitis he had met with. The child developed pneumonia after the peritonitis was established.—Dr. E. C. WILLIAMS mentioned two cases of pneumonia with complications he had treated. In one delusional insanity had arisen. The second was complicated with hiccough, which lasted four or five days, and nearly killed the patient. Obstinate hiccough used to be a more common complication than it was now. In his case morphia had been ineffectual as a remedy.—Dr. MARKHAM SKERRITT mentioned a case of pneumonia in which thrombosis of the pulmonary artery carried off the patient.

Drs. WALKER HALL and CAREY COOMBS demonstrated various macroscopical and microscopical pathological specimens.

February 13th, 1907.

Mr. JAMES TAYLOR, President, in the Chair.

An address was given by P. H. PYE-SMITH, Esq., M.D., F.R.C.P., F.R.S., on **Prognosis** (*vide* p. 1).

## Obituary Notices.

HERBERT W. KENDALL, F.R.C.S.

By the death, on December 23rd last, of Mr. H. W. Kendall, of Redland, the profession has lost a colleague who, both as a student and practitioner, was characterised by steadfast integrity of character and aim. He passed away at the early age of 39, after an illness of three weeks' duration, the end coming suddenly from pulmonary thrombosis dependent on lung trouble, following an attack of appendicitis, and at a time when he was showing signs of apparent recovery; his sudden death was a termination somewhat unexpected by his friends, and by the several medical and surgical colleagues who anxiously attended him.

As a general practitioner, he spared no time or pains for rich and poor alike. It was his very nature to be thorough in his work and kind in his ways, denying himself at the call of duty, and gaining the esteem of both patients and colleagues.

For several years past he was Honorary Surgeon to the Bristol Royal Hospital for Sick Children and Women; he was an able operator, and was much respected by the staff, committee, and nurses. His death will be a great loss to that institution, which he served so faithfully and well. He was also Medical Officer to the Maternity Home, and to the Surgical Aid Society; and, though holding several public appointments, he performed the duties of all thoroughly and creditably.

Mr. Kendall started practice in Bristol in 1895, after holding the posts of House Surgeon to the Great Northern Hospital, and of House Surgeon and Obstetric Officer to the Middlesex Hospital, where he studied in London. He leaves numerous professional and lay friends to mourn his loss.

ALFRED SHEEN, M.D. St. Andrews, M.R.C.S. England,  
D.P.H. Cantab.

BORN at Leicester in 1839, and educated at Hurstpierpoint, Alfred Sheen found the routine of a Civil Service appointment at Madras uncongenial, and in 1856 he entered the Madras Medical College, where he carried off many prizes, and found time to be a leading member of the Madras Cathedral choir. Yet unqualified, he returned to England in medical charge of a large ship. His student days were completed at Guy's Hospital, where he obtained

the Physical Society's prize for an essay on "Dysentery." In 1862 he qualified. In the following year the "Guyite Club" of 1863 was founded, of which he remained a member to the time of his death. Alfred Sheen's life work in Cardiff began in 1864, when he was appointed House Surgeon to the Cardiff Infirmary, at that time a small institution of some thirty beds. The House Surgeon was not only in charge inside, but also had to visit sick in the town, patients of the charity, and act as Secretary and General Superintendent. In this, his earliest work in Cardiff, Alfred Sheen acquitted himself well, displaying that abundant energy and power of work which were so characteristic of all his after life. He it was who first organised the "Infirmary Balls," ever since a successful annual function. In 1866 private practice was commenced; marriage and appointment to the Infirmary Honorary Staff followed shortly afterwards. Active practice was continued for forty years; indeed, to within a month of his death.

During his many years as Surgeon to the Cardiff Infirmary Alfred Sheen showed the greatest zeal, thoroughness and industry in his surgical work. He gave much time to the institution, and in the earlier days, when actual operations were not so numerous, much of the "case-taking" and dressing was done by his own hands. His perfect ambidexterity was a feature of his operating. The writer recalls best his transparent pleasure at the rapid and successful completion of an ovariectomy, and the slow, painstaking and methodical way in which he would dissect out a mass of tuberculous glands from the neck. Naturally at a time of change numerous innovations and additions were due to him; *inter alia*, he was the first to displace "antiseptic" by "aseptic" methods in Cardiff. In the numerous general duties which fall to a hospital administrator Alfred Sheen was always to the fore. When the Infirmary was moved to its present position in 1883, it was in the main due to his efforts that the site was obtained from the Marquis of Bute. He superintended every detail of its building, and, in addition, was an indefatigable collector of money to start it free from the burden of debt. It would not be too much to say that the Cardiff Infirmary building as it now exists stands as a monument to Alfred Sheen.

Space forbids reference to Alfred Sheen's many other activities—Initiator, Secretary and Treasurer of the South Wales branch, and until recently member of the Central Council, of the British Medical Association; Visiting Medical Officer to the Cardiff Workhouse Hospital, and an authority on Poor Law Medical Work; an original member of the Cardiff Medical Society, its first Secretary, at one time its President, and its first Honorary Member; Initiator, Treasurer, Chairman of Committee and Honorary Medical Officer of the Cardiff branch of the "Jubilee

Nurses"; a most active and useful member of the Council of University College, Cardiff; Treasurer and Hon. Surgeon-Colonel of the Church Lads' Brigade; Churchwarden of St. German's, Cardiff, to the time of his death—these are some of the many active and useful ways in which his life was spent.

There are certain members of the community to whom people instinctively go in time of trouble, and Alfred Sheen was one of these. All through his life, by correspondence or by interview, there came to him many who needed advice and help on various subjects, and advice and help were always willingly, carefully, and thoroughly given. Underneath a reticent and somewhat blunt manner was concealed an exceeding kindness of heart. His medical publications were as follows:—

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- Also papers on*  
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 "Women's Work in Populous Parishes."  
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## Local Medical Notes.

**University College, Bristol.**—A distinct step has been taken towards the University of Bristol by the complete incorporation of the Medical School with University College. The resolution agreeing to this was passed at a recent meeting of the Governors of the College. The present building has been used by the Medical Department for fourteen years, but there has so far been only co-operation between the two bodies. The present incorporation will increase the status of the School and College. The Medical School was at work more than forty years before the College was founded, and amongst its lecturers were some of the best men of the day. Hundreds of highly-trained men have been sent out by the School, which for so long stood in seclusion in the old Park—and Bristol medical men are to be found in all parts of the world.

**Long Fox Lecture.**—Dr. P. Watson Williams has been appointed lecturer for this year. It will be given in November, and the title and date will be announced in a later issue of this Journal.

**Examination Results.**—Students of the Medical Faculty have recently passed the following examinations:—

F.R.C.S. ENG.—*Primary Examination*: C. A. Joll, B.Sc. Lond.

CONJOINT BOARD.—*Medicine*: P. S. Connellan, C. E. K. Herapath. *Surgery*: J. W. J. Willcox, J. Ellington Jones\*, L.S.A. *Midwifery*: P. S. Tomlinson.

L.D.S., R.C.S. ENG.—*Mechanical Dentistry and Dental Metallurgy*: R. J. Burton. *Final Examination, I.*: W. H. Ireland. *II.*: F. C. Nicholls\*.

\* Completes Examination.

**Bristol Royal Infirmary.**—C. F. Walters, F.R.C.S. Eng., has been appointed Surgical Registrar; W. W. King, M.R.C.S., L.R.C.P., Resident Obstetric Officer; and A. J. Turner, M.B., B.S. Durham, Junior House Surgeon.

**Bristol General Hospital.**—T. E. Coulson, M.B., Ch.B. Edin., has been appointed Senior House Surgeon.

The following description of the new Isolation Block at the Bristol General Hospital, opened by the Lord Mayor and Lady Mayoress of Bristol, in the unavoidable absence of Lady Smyth, who had promised to perform the ceremony, on January 26th, 1907, will be of interest.

The limited area of the site necessitated a somewhat unusual

arrangement of plan. The building consists of two parts joined by a narrow, cross-ventilated neck. The south portion is devoted to accommodation for the patients and the northern part to that for nurses. The building contains two floors, the upper floor being reached by a separate staircase approached from the outside, so that there is no internal connection between the two floors. Each floor contains two wards of two beds each and one ward of one bed, with duty room, two bedrooms for nurses, and the usual baths and sanitary arrangements, stores, &c. Care has been taken to avoid crevices, where dust or other deleterious matter could be harboured; all surfaces are smooth and easily cleaned. The doors are of the Gilmour type, now generally well known; they have the appearance of being made out of a solid plank, but actually they are made up of a number of pieces, and veneered so that they present a perfectly smooth surface without ledges or sinkings; they are finished with white enamel. The walls are plastered with cement and will ultimately be finished with enamel. The floors are of Eubœolith, a material laid in a plastic state, afterwards hardening and receiving polish. It is jointless, waterproof, fire-resisting, and unaffected by temperature. There is a heating chamber in the basement, and the warming is by hot water on the low-pressure principle, with ventilating radiators of a type easily cleaned. The extraction is by means of an electric fan.

At the Annual Meeting of the Bristol General Hospital, held on March 11th, under the presidency of the Lord Mayor, an excellent report for the past year was presented, which stated that exceptionally heavy demands had been made on the resources of the Hospital, both financially and in the work of treating a larger number of patients than has hitherto been recorded. The possession of the second operating theatre continued to lead to the increasing number of cases requiring operations of a more or less serious character being promptly dealt with. The isolation wing was now completed and fully equipped, and the formal opening recently took place. The work done at the Avonmouth Hospital under the medical officer and sister in charge had been considerable. The number of in-patients was 2,165, and that of the out-patients 35,264—a record number for the institution. 482 patients were sent to the convalescent home, with beneficial results. As regards finance, the ordinary expenditure exceeded the income—which had remained the same as in 1905—by £2,626. The workpeople's contributions amounted to £2,225, an amount which almost equalled the annual subscriptions. During the coming year it is hoped to raise £12,000, to enable two important additions to be made, which are needed to keep the institution thoroughly up to date. We feel sure that with the example of Bristol's public spirit quite fresh in our minds, which aided Sir George White to raise £50,000 for the Infirmary, this sum is not too much to ask for, considering the great work that is carried on at the General Hospital.

**Bristol Royal Hospital for Sick Children and Women.**—L. N. Morris, M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon.

**Newport General Hospital.**—J. B. V. Watts, M.B., B.Sc. Lond., has been appointed House Surgeon.

**Bristol Dispensary.**—The committee of the Bristol Dispensary report that the number of patients recommended for relief in 1906 has been 10,323, viz. 7,997 at Castle Green and 2,326 at Bedminster, this being an increase over the previous year of 282. The number of notes sold to subscribers was 11,322. The committee much regret to record the death of their esteemed colleague, Mr. J. Hudson Smith, who had been a member of the committee for 22 years, and who generously remembered the institution in his will. W. H. A. Elliott, M.B., B.S.Lond., has been elected an additional surgeon to the institution.

**The Bristol Medical Dramatic Club,** which has now reached its twenty-ninth season, recently gave performances of *Home, Sweet Home, with Variations*. The performances were a great success, and the proceeds will be handed to the Medical Clubs' Union for the promotion of its endeavour to secure an athletic ground.

**Royal United Hospital, Bath.**—A public meeting was held at the Guildhall, Bath, on January 22nd, under the presidency of the Mayor, to consider the financial position of the Royal United Hospital, and the best means of reducing the debt of £5,000 which exists on the institution. The Mayor will make an effort to wipe off the debt during his year of office, and stated that he had already received several subscriptions for this purpose. After some discussion the meeting pledged itself to support the Mayor in his admirable determination to place the Royal United Hospital on a sound financial basis.

**South Devon and East Cornwall Hospital, Plymouth.**—Lionel Shingleton Smith, M.R.C.S., L.R.C.P., has been appointed House Surgeon to this hospital.

**Devon and Cornwall Ear and Throat Hospital.**—The twentieth annual meeting of the subscribers to the Devon and Cornwall Ear and Throat Hospital, Plymouth, was held on February 5th, under the presidency of the Mayor. The medical report stated that during 1906 there had been 987 patients treated, compared with 859 in 1905, and that 23 in-patients had been admitted against 12 in the previous year.

**"Index Medicus."**—An intimation has been issued by the Carnegie Institution of Washington that "unless it appears that the *Index Medicus* is of greater service to the medical profession, and can help to support itself to a greater extent than in the past, it may become advisable to discontinue its publication." The *Index Medicus* was established in 1879, and died for want of support in 1899. In 1903 the Carnegie Institution made a grant



of £2,000 a year to keep it alive, whilst the subscription price was reduced from £5 to 25s. per annum. We understand that the total number of subscribers is 532, of whom 396 are in the United States. All those engaged in bibliographical research will remember how difficult and tedious searching for references became when the *Index Medicus* ceased in 1899, and it is to be hoped that many doctors—we will not say medical libraries, as we hope there are none who are not subscribers—will acknowledge the generosity of the Carnegie Institution by becoming subscribers. The subscription (25s.) defrays only about one-fifth of the cost of production.

**Pathological Demonstrations.**—On February 14th Dr. J. M. H. Eyre, of Guys Hospital, London, gave a demonstration on Pneumococci at the Bristol Eye Hospital, upon the invitation of Professor Walker Hall. Dr. Eyre pointed out the differences in the several types of pneumococci, and deprecated the dependence upon morphological characters alone for routine diagnosis. He insisted that numerous cultural tests should be carried out before any diplococcus was designated as the pneumococcus. He also remarked upon the manner in which the tissues resisted the pneumococcal organisms. In some cases a cellular, in others a fibrinous exudation, marked the response. Dr. Eyre considers that pneumonia is a distinct septicæmic condition, the cocci being present in the blood stream at an early period of the disease.

On February 18th Professor Walker Hall gave a lantern demonstration on epidemic cerebro-spinal meningitis and malaria and blood diseases at the Royal Infirmary. He showed some of the new serum, detailed its mode of preparation, and explained the manner of its application.

We understand that Professor Symmers, of Belfast, is shortly expected to take one of these demonstrations. The subject will be "Bilharziosis." Professor Symmers was able to obtain a large number of specimens during his tenure of office in Cairo. Bilharziosis is now becoming so common in this district, that we feel sure everyone will be glad of an opportunity of discussing the condition.

We are enabled to state that the coming summer "Friday" demonstrations will assume rather a different character from those of the past winter session. Dr. Walker Hall proposes to devote the entire term to the diseases of the stomach and intestines. The bacteriology, parasitology, and chemistry of the tract will be considered in detail, and the ulcerations and obstructions will be dealt with fully. A feature of the course will be the condition of the gastric and intestinal mucosæ and contents in diseases of the circulatory, respiratory, renal, and nervous systems. Practitioners will be admitted on presentation of their cards.



CATALOGUED

E. H. B.



*J. W. Hanson & Co. N. Y.*

*Photo. Alex. Leitch & Co.*

*Very sincerely yours,  
E. Marcham Sheritt-*

# The Bristol Medico-Chirurgical Journal.

Published by  
S. B. P. & Co.,  
1, Broad Street,  
Bristol.

## Country Notices.

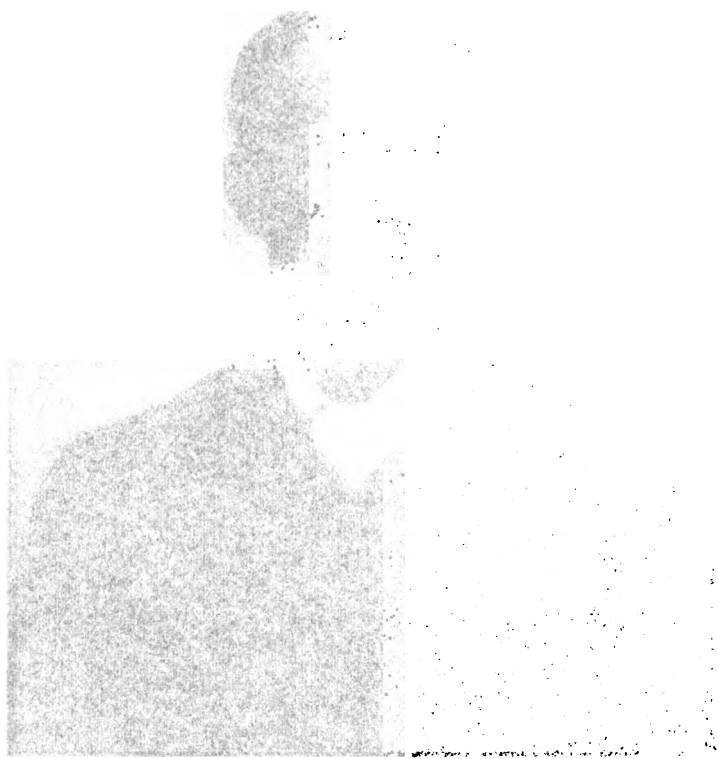
EDWARD MACKAY, SECRETARY OF THE JOURNAL.

The Editors of the *Journal* are  
desirous to receive notices of  
cases, and of the progress of  
any new or improved  
method of treatment.

They are also desirous to receive  
communications on any subject  
connected with the  
practice of medicine, surgery,  
or the management of  
diseases.

It is only our duty to be extremely cautious in our selection of  
cases for publication, and we are especially desirous to receive  
cases of such a nature as will be so well known that they will  
be of general interest to the profession. How many of our  
readers have seen you in the *Journal* of this year, and how  
many are anxious to find out "in memoriam" the names of the  
doctors who have been mentioned. Our readers will be glad to  
know the names of Edward, John, Fox, William Johnson, and  
of the surgeons, Henry Ansell, and John Lawrence, and of the  
doctors who have been mentioned.

Published by S. B. P. & Co.,  
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*John J. Thorne*

# The Bristol Medico-Chirurgical Journal.

*"Scire est nescire, nisi id me  
Scire alius scireet."*

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JUNE, 1907.

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## Obituary Notice.

EDWARD MARKHAM SKERRITT, M.D., F.R.C.P.

Thou whom none knoweth, yet they lie  
Who say Thou art not, speak with me!  
I am because Thou bidst me be,  
And when Thou bidst me, I must die. . . .

\* \* \* \* \*

Oh, rend the Heaven! Break up the height,  
The depth, between Thy works and Thee!  
Tear off the veil, that Earth may see  
The fount of good, the judge of right! <sup>1</sup>—BOURDILLON.

It is only human to desire to record some memorial of a man we have lost, especially when he has been associated with us in many years of similar work, and when we so well know that his life was a model from which we may ourselves draw many useful lessons. In the twenty-five years of the life of this *Journal* we have had many occasions to give an "In memoriam" record of the lives of those who have gone before. Our readers will remember Augustin Prichard, Edward Long Fox, William Johnstone Fyffe, Joseph Griffiths Swayne, Henry Marshall, Aust Lawrence, and the first

<sup>1</sup> *Monthly Review*, March, 1907.

editor of this Journal, James Greig Smith, whose life, all too short, was terminated somewhat abruptly in the midst of active work by an attack of pneumonia. And now we have to lament the death of Edward Markham Skerritt, also prematurely cut off by pneumonia at perhaps the most useful period of his career.

We cherish the memory of our "mighty dead," but their message to us is that it is the business of man to keep things going; no one of us is indispensable, but, nevertheless, the best of us are much missed at the time of departure. He who has so lived as to "leave the world a little better than he found it," must of necessity leave a gap when his chair becomes vacant.

That such a gap followed the death of Dr. Skerritt was shown by the striking demonstration at the funeral, which took place on Thursday, May 2nd, 1907, when the presence at St. Paul's Church of a very large number of mourners, including a large proportion of his own profession—by whom he was so much esteemed—gave the most pronounced testimony to the widespread feeling of regret that his life's work had ended. He was buried at Redland Green amidst every manifestation of sadness and regret, expressed not only by his own immediate friends, professional colleagues and patients, but by representatives of the various public bodies with which his work had been associated.

Edward Markham Skerritt was born at Chelsea on December 30th, 1848, and he died on Monday, April 29th, 1907, at the comparatively early age of 59. His education commenced at Mill Hill School, but afterwards he was sent to Amersham Hall School, where he found as school-fellows many associates who have risen to considerable distinction in various walks of life. His early education appears to have been of a robust and vigorous if not of an ascetic type, and he ever after lived a most active, strenuous career, never sparing himself or taking rest and quiet. On leaving school he matriculated at the University of London (1866), and graduated as B.A. Lond. in 1868. In the following year he passed the Preliminary Scientific M.B. Examination, and then entered as a medical student at University College, London, at a time when this school was in a very vigorous state, and attracted a large proportion of the ablest students in London,

many of whom have come to the front and are occupying leading positions in London and the provinces. With such competitors Skerritt easily held his own; he won many prizes and class distinctions, and when he passed the examinations for the M.B., B.S. he obtained the University gold medals for Physiology, Medicine, and Obstetric Medicine. In 1874 he obtained the degree of M.D. Lond. As a student he was noted for his unflinching industry, and a methodical habit which enabled him to acquire knowledge easily and to learn accurately. Although reserved, he was much liked by his fellow students, who admired his ability, and were attracted by his simple straightforwardness. As a mark of the success of his student's course he was elected a Fellow of his College, and he obtained the Atkinson-Morley surgical scholarship, which was the highest surgical distinction open to him. As Sir John Erichsen's house surgeon, and Sir William Jenner's house physician, he had the fullest opportunity of gaining the soundest medical and surgical skill, so that by his own natural ability, and by the best possible training, it was felt that Skerritt had laid an excellent foundation for a very distinguished career. It was in 1875 that a vacancy for physician—caused by the death of Dr. Samuel Martyn—at the Bristol General Hospital gave the opportunity which the electors wisely accepted when they appointed him to serve in an institution which for thirty-two years since has gained so much from his painstaking and skilful work as physician. He became M.R.C.P. in 1876, was elected a Fellow in 1885, and afterwards a member of the Council of the Royal College of Physicians of London.

As a clinical teacher he will long be missed. His instruction was good, and he was earnest in imparting it. Many generations of old Bristol students must have a grateful recollection of the benefits they have themselves obtained by his example as well as by precept. As Joint Lecturer and later Professor of Medicine (this course having been always divided between a member of the staff of the Infirmary and one from the Hospital) he was methodical and clear; he devoted especial attention to diseases of the heart and lungs, and these lectures,



with a course on general febrile maladies, usually occupied the whole of the time available.

For many years he acted as Secretary, and afterwards became the first Dean of the Medical Faculty in the University College. A colleague writes, "These offices were no sinecure, and gave him an enormous amount of work, as the negotiations for incorporation extended over some years. . . . Dr. Skerritt was *ex officio* a member of the Council of the College, and in all matters medical was the authority; but his knowledge of business, his sound judgment and shrewd common sense, made him a valuable member of the Council in all that related to the welfare of the College." The engineering Chairman of the Council once remarked to the writer that Skerritt appeared to be "a very level-headed person;" and so he was, for he had a wholesome detestation of fads of all descriptions. It was felt that he was not only a skilled physician, but a wise counsellor, a man of sterling uprightness, and of unimpeachable sincerity, essentially a man to be trusted.

He held in turn all the offices which the local profession had to offer. He never declined anything which appeared to be his duty, or in which he could do good service. As Secretary for many years of the Bath and Bristol Branch, as President of the Branch, as a member of the central Council of the Association, as Treasurer of the Association in 1902, and Vice-President in 1904, he was a mainstay of the British Medical Association, and during the last few years, when intricate details under the new constitution have been much discussed, Skerritt's knowledge and clear judgment have been invaluable. Others have written on these points in the *Journal* of the Association (May 11th, p. 1159), and with regrets that "his place in our Council Chamber is empty, and with sorrowful hearts we say farewell to one who has left us before his time."

Skerritt was one of the very early members of the Bristol Medico-Chirurgical Society, and was rarely absent from its monthly meeting. He was President in 1892-3, and then gave a very characteristic presidential address on "The Teachings of Failure." Many other papers and addresses have been published

from time to time in this *Journal*, and it will be generally admitted that Skerritt never wrote for the sake of writing, and that whatever he wrote is worth reading. He was not a voluminous writer, but he always had an object in his writing, and expressed himself clearly and concisely. His Bradshaw Lecture, given before the Royal College of Physicians in 1897, is an excellent outline of things which had passed through his mind for many years, and in which he held very definite views. He had no great ambition to be known as an author; his time was actively employed in other ways. He was no advocate of a gospel of inactivity, but his powers were commonly expended in other fields.

The Queen Victoria Jubilee Convalescent Home has, from its commencement, derived the advantage of Dr. Skerritt's presence on its Board of Governors, and his work there is shown by the resolution adopted by them at a meeting on May 17th, as follows: "The Governors of the Convalescent Home desire to place on record their sense of the great loss the City and many of its most useful institutions has incurred in the removal of one whose remarkable abilities were only equalled by his kindness of heart and his readiness to serve others. They record especially their appreciation of the interest he took in the founding of this Home, the value of his aid in arranging all its organisation, and the constant service he rendered in its management."

Another institution which owes much to his services is the Winsley Sanatorium for the poorer consumptives of the three neighbouring counties. He was a member of the original executive committee, and he took a leading part in the initiation and furtherance of a method of treatment which his long experience of chest diseases had shown to be most desirable. It was a satisfaction to him to feel that this Institution is now in good working order, and is becoming more and more increasingly useful.

With one exception he was the oldest member of the Medical Reading Society, and he was present at the centenary meeting, when eighteen past and present members met at dinner on April 3rd. He was then in good health and spirits, looking

strong and wiry as usual, with a good expectation of a long continued career of useful activity. The monthly meetings of this Society have conduced much to the furtherance of good fellowship, and Skerritt's presence has doubtless tended towards the diminution of such professional jealousy and rivalry as at times exists amongst many professional communities. Skerritt was elected a member of this little Society in 1876, so that he had assisted in over one-third of its centenarian life.

With regard to the social characteristics of Skerritt, the following personal appreciation is written by one of his most intimate friends, Dr. Barclay J. Baron:—

“ My friendship with Edward Markham Skerritt began in 1883, when, as a new-comer to Clifton and a near neighbour, I called on him. He was courteous and kind, as was his wont, but, more important, he was distinctly encouraging as to my prospects of practice in Bristol. This faculty of encouraging younger members of the profession in times of difficulty was a trait in his character of peculiar value to many of us. He invited me to go round the wards of the General Hospital with him, and of this invitation I availed myself, during the next year, on many occasions. I profited greatly by the clear, logical way in which he arrived at a diagnosis. I was struck by his faculty for deducing feasible theories as to the causation of disease from ascertainable facts, and in particular by the simplicity of his therapeutic measures. Markham Skerritt was no more attracted by newly introduced, well advertised or fashionable drugs than he was by the change of fashions in millinery, and I feel certain that in this respect his influence as a physician was of a decidedly beneficial character. At this time he prescribed alcohol for patients in smaller quantities than most men, and as his experience increased he prescribed it less and less, until, in his last days it certainly occupied an unimportant place in his medical armamentarium. His great reliance was on rest and warmth, on *vis medicatrix naturæ* rather than on drugs.

“ In 1884 my humble dwelling was visited one evening by Skerritt and Aust Lawrence, and the greeting of the former was ‘ Le roi est mort : vive le roi ! ’ This meant that the late Dr.

Burder had presented his resignation of the physiciancy of the Bristol General Hospital to his colleagues, and Skerritt asked me if I would become a candidate for the vacant post. Largely owing to his support I was appointed without contest, and thus became his Hospital colleague. I had by this time formed a very high opinion of my new friend, but I had never seen him in counsel with other senior members of the profession until the first staff meeting took place. I was greatly interested in finding that my estimate of him was that held by all his colleagues, and if ever a difference of opinion arose Markham Skerritt almost invariably induced the staff to adopt the views which he himself held. In debate he was certainly very strong, because he never placed himself in a position of antagonism to others without having first satisfied himself that he was right, and with rare ability he never under-estimated the strength of his opponents' attack, and so was fully prepared to meet and overwhelm it.

“Others have spoken to his Hospital and University College career, and to his sterling value to practitioners in consultation. As a consultant, as indeed in other relations of life, Skerritt listened rather than talked. He was distinctly reserved, and, indeed, many patients would have liked him to unbend and say more. In point of fact, he was essentially a home-loving man. He donned a dress-coat unwillingly, and was seen but little at clubs and dinners; but he received his guests in his own house, at all times, with the refined hospitality of a large heart. Those of us who knew him intimately in Clifton found that he very frequently relaxed the stiffness of his manner, and was full of humour and good fellowship. But to see Markham Skerritt full of the love of life, really humorous and genial, one must have done as I did, gone down and stayed with him on Dartmoor or Exmoor. When I first visited him at Throwleigh, near Chagford, I was met at the farmhouse gate by him with no hat, with certainly no waistcoat, I believe without a necktie. He had then not quite developed his intense devotion to open air living, but he had at least joined the ‘hatless brigade.’ It was a charming picture of family happiness which greeted me as he, his wife, his daughter and I wandered over those grand old moors. He was

intensely observant of the ever-changing beauties of flower and insect life, sunshine and cloud, and deeply impressed by the wonderful solitude of the Devon Tors. For his was indeed a very simple, natural mind, and whilst he pretended to no profound knowledge of Botany or Entomology, he lived his days of leisure on the countryside with a spirit very responsive to its open secret.

“ On another occasion I visited him at Avill, near Dunster, whither he was in the habit of taking horses and hunting with the Devon and Somerset Staghounds. By this time he had become a great devotee of the open air, and it was his delight for us all to have breakfast in front of the farmhouse door at a table where a robin, which he had induced to recognise us as friends, came regularly to feed from our plates. On one occasion Aust Lawrence was also a guest, and on the cold days—which sometimes set in at the end of August—it was a constant source of entertainment to watch him (for he hated too much cold air) taking every opportunity of our host's temporary absence from the room to shut the casement windows, and to see Skerritt on his return, finding that the curtains were not properly blowing about, open the windows again with distinct rumblings of wrath at the stupidity of servant girls who did not appreciate their privilege of living in God's air.

“ Whatever Skerritt did he did with all his might, and hunting was no exception to the rule. I have known him on horseback from early morning till evening under a blazing sun, with no more refreshment than a few raisins and a little chocolate, and his 'pistol' full of cold tea. He never, with that modesty we all know was so deeply ingrained in his nature, talked much of wonderful runs at which he had been present; but once a well-known sportsman, comparing him with another hunting doctor, said: '—s heart is as big as a threepenny bit, but Skerritt's is as big as your hat.'

“ Skerritt was genuinely fond of physical and mental hard work. I spent many an hour watching him dip clinkers in a bucket of cement to build them together into a large fernery at Thornton House. He worked harder than any mason could have

been induced to do, without coat, waistcoat or collar, and with his sleeves rolled up, and was bubbling over with fun when he was nearly caught by patients in this unclothed condition. He stayed with me in the country at my cottage, and begged to be put to work in the garden. He and I spent many an hour at the back-breaking labour of strawberry planting, and more than once, when I had a mind to ease off for a time, he compelled me by precept and example not to be lazy. He took a deep scientific interest in watching my gardener's attempts to overcome an invasion of 'spot' in tomato plants, and was as delighted as a schoolboy when he, his wife, my wife and I, cut into a peach weighing 17 oz. which my gardener had grown.

"He had a great love of altering the residences which he purchased, and employed no architect to draw his plans. For months he was busy designing and seeing executed the beautiful oak room which served as a waiting-room at Thornton House and at Edgcumbe House, and the beloved fittings of which followed him to the house in which he died, and were there re-erected. In this last place of residence he gratified to the full his architectural talent. Moreover, he undertook personally the improvements in his lovely garden, and discussed with me, as if the matter were one of extreme importance, the selection of apple and pear trees. In the last weeks of his life—in fact, up to the very last day he was able—he was engaged in heavy rock work in the quarry attached to his house, which even involved blasting. This work my dear old friend leaves, like few things to which he put his hand, unfinished.

"Many years ago he and I went to Berlin together to see for ourselves what we could of the value of Koch's Tuberculin. I am bound to confess that I had intended to make this something of a picnic among my old German friends, but I found I was vastly mistaken. Skerritt went to work, and work he did from morning to night, and compelled me to do the same; and in the week we spent there we worked as hard as I have ever done in my life. This was Markham Skerritt, and his powers of endurance were such that it was extremely difficult to keep pace with him. On our return we wrote a joint paper on Koch's

treatment of Tuberculosis, which appeared in the *Bristol Medico-Chirurgical Journal* (Vol. VIII.). This we started to compose at 8 p.m., and Skerritt left me in a most dilapidated condition at five the next morning, having written—with a short interlude for supper—right through the night. So stubborn was his iron constitution, that he was able to go home, have his bath, and set about his daily round of work. When in Berlin we stayed in the house of my honoured old friend Sanitätsrat Dr. Patschkowski, and during our stay our hostess celebrated her birthday. I shall never forget seeing Skerritt with a huge bouquet—which we had purchased for the occasion—in his hand, ushered into a room where a dozen German ladies were in the midst of a ‘Kaffee Klatsch,’ nor at the supper which afterwards took place, hearing him—who knew no German, whilst some of the guests knew little English—endeavour to converse and make a little speech in Latin. I have had extremely kind messages of condolence with his widow from the friends he then made, showing that he has not been forgotten.

“As husband, father and friend, Markham Skerritt was a rare soul. He ever gave more than he wished to receive; he ever gave of his very best. His judgment was sound and unerring, and his desire to help all those who came to him was boundless. Busy as he was, he could always find time to help others. His opinion was expressed with complete independence to friend, doctor and patient alike, and while such independence may be said to come more easily from men in easy circumstances, this, in my opinion, has no bearing whatever on what was a sterling quality of Markham Skerritt’s mind. It was a characteristic proper to him by inheritance, and fostered by environment.

“The shock of the death of his only child—coming to a man of his reserved but deep and tender nature—was one from which he never completely recovered. Long after her death his wife and he dined quietly at my house, and more than once in the course of light conversation his eyes filled with tears, and I knew that he was standing by a graveside. Once speaking to him about it, and apologising, as I did, for reopening a wound, his reply was: ‘You have not done that, my friend, because it is always open.’

“ On Monday, 29th April, large numbers of us felt that one of the finest types of Christian gentlemen whom it has ever been our happy lot to know left us and joined the great majority.”

Geo. W. Russell, speaking of the Ideal Character, remarks : “ The man who owns it may be very homely, very insignificant ; as the world judges, very uninteresting. But the character itself bears the sign-manual of Heaven, writ large in purity and courage, and gentleness and unselfishness ; and the man, by a secret power which he has never realised, leavens the world in which his lot is cast.” And further he quotes from Dr. Liddon : “ It is by the work of grace in lives such as this that both the church and society are braced and sanctified ; it is from such lives that a truer, loftier, more disinterested, sterner, yet withal, most assuredly not less affectionate spirit than that of common men radiates into and elevates an entire generation.”<sup>1</sup>

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## CASES ILLUSTRATING THE MORE UNUSUAL COMPLICATIONS OF PNEUMONIA.

BY

J. MICHELL CLARKE, M.A., M.D. Cantab., F.R.C.P.,

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THE following cases illustrate some of the rarer complications met with in pneumonia. The occurrence of such complications forms one of the strongest arguments in support of the modern conception of pneumonia as a general infection. These instances occurred in a consecutive series of 126 cases of pneumonia. They comprise **peritonitis** (2); **thrombosis of vessels** (3), in one of which there was also general pneumococcic infection; **endocarditis** (2); **nephritis** (1); **arthritis** (1). In the same series there were also three cases of delayed or imperfect resolution of the consolidated lung, and three cases of empyema, neither of which I have thought it worth while to report. With regard to cases of imperfect or absent resolution, it may be remarked, however, that if an example of this condition comes under observation for the first time at some considerable interval after

the original illness, valuable aid is given in diagnosis by the common circumstance that the consolidated area corresponds exactly to the superficial delimitation of one lobe of a lung on the surface of the chest.

There is also a point of importance in empyemata following pneumonia, that is, that at an early stage firm adhesions may unite the visceral and parietal pleuræ along the septa between the lobes of the lung, and thus on the right side there may be a collection of pus over the lower lobe entirely shut off by adhesions along the interlobar septum from another smaller collection over the middle lobe. This happened in one of the above cases of empyema, in which after the pus had been evacuated from an empyema over the right lower lobe it was found necessary to do a further operation for a small collection of pus exactly corresponding to the superficial extent of the middle lobe, and completely shut off from the first one.

**Pneumococæc Peritonitis.**—Peritonitis is a rare complication of pneumonia, although, as is well known, severe pain in the upper part of the abdomen accompanied by great diminution in the respiratory movements in the same situation is common, and occasionally leads to errors in diagnosis. Though peritonitis is said to occur in pneumonia by direct extension through the diaphragm, it would seem more generally the result of a general pneumococæc infection, as appears likely in the following instances, which occurred in two sisters.

Winifred B., æt. 9, admitted February 7th. The patient when æt. 3 had several attacks of convulsions, but with this exception, although never robust, she had had no serious illness. On January 15th she went to school apparently in good health, but returned midday with a pain in her stomach, and vomited. The next day she was delirious, but this delirium soon passed off. During the next fortnight she suffered from severe paroxysmal pain in the abdomen, relieved by rubbing it. For the first week she was repeatedly sick, and the abdomen swelled and became hard. She had a troublesome, painful cough, the tongue was thickly furred, and an eruption of labial herpes appeared.

On February 1st the skin gave way over the umbilicus, and about two quarts of thin, greenish-yellow fluid was discharged, with great relief to the pain. Since that day there had been a slight discharge from the umbilicus. The bowels were moved

regularly throughout. On admission the child was thin and emaciated, with the remains of labial herpes about the mouth.

On admission, February 7th, the chest was small and badly formed. There was some dulness over the base of the right lung, with coarse râles in the axillary region, and over the left base bronchial breathing and some small crepitations. The heart was normal. The abdomen was distended, its walls rigid, and there was a feeling of resistance about the abdomen generally. It moved on respiration. There was a sinus, discharging pus, at the umbilicus. There was dulness over the front of the abdomen, but the flanks were resonant and there was no evidence of free fluid. The temperature was hectic, varying between normal in the morning and  $101^{\circ}$  at night.

The general appearance of the child and the physical signs in the abdomen suggested abdominal tuberculosis; examination of the pus from the sinus, however, showed no tubercle bacilli, but the pneumococcus was obtained in pure culture.

The blood gave erythrocytes 2,650,000, white corpuscles 15,000 to c.mm. A small incision was made just below the umbilicus, and a large cavity, shut off from the rest of the peritoneum, was discovered between the omentum and the anterior abdominal wall, from which about two pints of pus were evacuated. After the operation the temperature fell to normal, the sinus gradually closed up, and she left the hospital quite well five weeks later.

On March 2nd Bessie B., æt. 4, the sister of the above patient, was admitted, with the history that on January 24th, three days after her sister was taken ill, she developed a bad cold, with fits of shivering and several attacks of vomiting. During the next two weeks she was very ill with high fever, a bad cough, and pains in the chest and abdomen. The pains in the abdomen were paroxysmal, at times very severe, and were relieved by poultices. There was diarrhœa at first, but the bowels were afterwards moved regularly. The vomiting ceased after the first week. The abdomen became swollen, distended, and hard, and as the child did not get better, she was brought to the hospital.

On admission the child was pale and emaciated. There were a few scattered râles at the bases of the lungs, otherwise there were no abnormal physical signs in the chest. The pulse was 120; respiration 30; temperature  $99.5^{\circ}$ . The abdomen was much distended, measuring  $22\frac{1}{2}$  inches at umbilicus. It was dull all over, except in the epigastric region. There was a distinct fluid thrill. The skin around the umbilicus was red and dusky. The abdomen moved very little with respiration.

The day after admission Mr. Morton made a small incision between the umbilicus and xiphoid cartilage, and evacuated a large quantity of greenish yellow, fairly thick pus. On examination the organisms obtained gave the cultural characteristics of

the pneumococcus. The after history of the case was uneventful, the discharge rapidly diminished, and the patient left the hospital quite well twenty-five days later.

The interesting point is the occurrence of the same complication, and that an uncommon one, in two sisters, and also, in the first case, the close resemblance clinically to abdominal tuberculosis, at once cleared up by the discovery of the pneumococcus in the pus.

**Cases of Thrombosis of Vessels.**—Thrombosis is a rare complication of pneumonia. In 27 out of 32 cases collected by Steiner the time of its appearance was during convalescence. According to Osler, it nearly always occurs in the femoral veins, and is still more uncommon in arteries than in veins.

*Thrombosis of Left Superficial Femoral Vein.* The patient was a strong, healthy collier, of temperate habits. He had a severe chill on December 24th, and on the 25th a rigor with pain in the left side of the chest, and was admitted into hospital on 26th with the signs of lobar pneumonia at the left base. The course of the pneumonia was uneventful, and terminated by crisis on December 31st. The heart's action was well sustained throughout; there were no murmurs; the pulse was good, varying from 80—96. A leucocyte count on the fifth day gave 45,000 to c.mm. The urine was normal. On the thirteenth day, when convalescence was apparently proceeding normally, the temperature, which had been normal for five days, rose to 99.5°, and he complained of pain in the left groin and calf, and the left thigh and leg swelled with great rapidity. The next day a hard, tender, band-like swelling could be felt along the course of the left superficial femoral vein, and a swollen vein on the calf leading up to this. There was no further constitutional disturbance, and no sign of any heart affection. Under the usual treatment pain and swelling gradually subsided, and by the end of January all evidence of the thrombosis had disappeared. He left the hospital well on February 3rd.

The most notable feature of the case is the rapid onset, and the equally rapid clearing up of the lesion, in marked contrast with the tedious course of most cases of thrombosis of the femoral vein. The cause was obscure; there was no general infection, and no affection of the heart, whilst the well-marked leucocytosis in a moderately severe attack of pneumonia showed that the patient's resistance was good.

*Thrombosis of Cerebral Vessels.* J. H., æt. 25, had always enjoyed good health, but was said to have had a slight discharge

from the right ear before present attack. It was doubtful, however, whether this discharge was more than a little wax. He had felt ill for a week before, being obliged to give up work on October 29th. He was first seen by Mr. E. H. C. Pauli on October 31st, who found that his temperature was  $102^{\circ}$ , and that there was pneumonia of the lower lobe of the right lung. The crisis occurred on November 1st, and he was apparently doing well, when on November 3rd he had two slight rigors, an attack of general epileptiform convulsions, and his temperature, previously normal, rose to  $101^{\circ}$ . He vomited several times, and complained of headache. The temperature remained about  $102^{\circ}$ ; there was no paralysis of any muscles, no recurrence of rigors, nor fresh symptoms, but on November 4th he became drowsy, and this gradually deepened into coma.

On November 6th, when I saw him, he was in a condition of moderately deep coma; he did not speak, but opened his eyes when shouted at. The pulse was 120; the respiration 32, irregular and often sighing. There was deficient resonance over the base of the right lung, and *redux* crepitant râles were heard here. The cardiac apex beat and area of dulness were normal, the pulmonary second sound accentuated and the first sound at the apex indistinct. Abdominal organs normal. The pupils acted to light, and were of moderate size, the right larger than the left. There was no localised paralysis; he could move his limbs; the arms were flaccid, the legs a little rigid at the knees. There was no rigidity of the neck muscles. The knee-jerks were present, not increased; the plantar reflexes were extensor in character; there was no ankle-clonus.

He could not swallow on this day; and there had been incontinence of urine and fæces for two days. The right ear contained wax, so that the drum could not be seen. The outline of the optic discs appeared a little blurred, but they were not hyperæmic, and there was no definite optic neuritis. On making a lumbar puncture, about  $1\frac{1}{2}$  ounces of perfectly clear, limpid fluid without any deposit were withdrawn.

In view of the difficulty of diagnosis in this case, the result of the lumbar puncture was especially important, as it enabled one to exclude meningitis, and probably intra-cranial abscess, a possible complication in view of the uncertain history of discharge from the ear. Thrombosis of cerebral veins was thought to be the most probable diagnosis.

The patient died the same evening. An examination of the brain was made at his home under considerable difficulties. Unfortunately, the result of this examination was negative, as the exact cause of the cerebral symptoms was not made out, but it was valuable as proving the absence of meningitis and intra-cranial abscess. Thrombosis of cerebral vessels is not always easily recognised, especially under the conditions in which the

examination of the brain was made in this case; and I think that this was the probable cause of death.

Apart from meningitis, paralysis of cerebral origin, generally hemiplegic, but sometimes monoplegic, occasionally occurs in pneumonia, either early in the disease or during convalescence.

In some of these cases of hemiplegia no gross lesion is found after death, and they are often attributed to the effects of toxins. In those cases in which there is a *post-mortem* lesion, it is generally softening from embolism or thrombosis. Probably in some cases reported as without lesion a patch of recent softening has escaped notice, which, if it is small, is quite possible.

*General Pneumococcic Infection—Thrombosis of Vessels.* The patient, E. C., was a horse-driver, æt. 23, who had never had a day's illness previously. The illness began with pain in the head on May 5th, followed on 6th by purulent discharge from the left ear, and on the 7th by severe pain in the left side of the chest, which interfered with respiration, and by vomiting. He was admitted to hospital on May 8th with well-marked signs of pneumonia of the lower lobe of the left lung. The heart was normal, the area of dulness not increased, and the pulmonary second sound well accentuated. Pulse 80; respiration rate 60; temperature 102.5°; leucocytes 18,750 to c.mm. Urine contained no sugar or albumin. Chlorides greatly deficient. He went on fairly well until the eighth day, when he had a rigor, and his temperature rose to 105°. It was noticed that his neck was swollen, and that there was thrombosis of the left median basilic vein extending into the basilic and median cephalic veins, the left forearm being swollen. The leucocyte count was now 25,700 to c.mm.; erythrocytes 4,000,000; hæmoglobin 90 per cent.

The following three days the temperature was normal, and the patient felt much better. On the twelfth day the temperature suddenly rose again to 105°. On this day a culture made from blood taken from the right arm showed a pure growth of pneumococci. During the next few days the patient felt better, in spite of the high range of temperature. Further, his tongue was red and dry, and his pulse, which had previously been about 68—72, now varied from 116—124. Leucocytes 21,800 to c.mm. The physical signs at the left base indicated that the consolidation was slowly clearing up in spite of the grave constitutional symptoms.

On the twenty-second day of the illness 5 cc. of antipneumococcic serum were injected. On the previous day he had had another rigor, and rise of temperature to 105°. The leucocyte count was now 19,375 to c.mm. A trace of albumin had appeared in the urine, which also gave a distinct band of urobilin.

On the twenty-fourth day, as the fever still continued high and the rigors recurred daily, a second injection of 5 cc. serum was given, with no appreciable effect, unless a fall of temperature from 103° to 101° be so reckoned.

There had been no extension of the thrombosis in the veins of the left arm, which remained limited to the veins in which it first appeared. No other thrombosed veins were detected elsewhere. There was no enlargement of the spleen that could be detected clinically at any period of the illness. The physical signs in the lungs remained stationary, the consolidation only partly clearing up.

On the twenty-eighth day of the disease the temperature was lower, at about  $102^{\circ}$ , but he was wandering in mind, looked haggard and emaciated, was sweating profusely, had partial incontinence of urine, and was obviously sinking. He died two days later.

The results of the *post-mortem* examination confirmed the diagnosis made during life. The thrombosis here was undoubtedly part of a severe general pneumococcic infection, and the gravity of the case was due to this latter condition, and not to the thrombosis, which could only be considered an incident in the illness, and not contributing to the lethal result.

**Endocarditis.**—*Double Pneumonia.* Maurice Y., æt. 19, engine cleaner. There was no history of any previous illness. For a few weeks the patient had suffered from an obstinate cold in the head, when on October 5th he was taken with pain in the right side of the chest, cough, fever and profuse sweats. He went to bed, and the next day the symptoms had increased, and he coughed up some rusty, tenacious sputum.

He was admitted on October 9th with well-marked signs of consolidation of the lower lobe of the right lung, and there was also dulness and bronchial breathing at the left base. The heart's apex was in the normal position, and the area of cardiac dulness normal. No murmur was heard. The temperature was  $103^{\circ}$ ; pulse 90; respiration 30, shallow and irregular.

On October 10th the signs at the left base had increased, and now indicated extensive consolidation of the lower lobe of the left lung. A pleuritic rub was audible all over this lobe, and there was also well-marked pleuro-pericardial friction. The temperature was  $102^{\circ}$  on this and the following day, October 11th, when his pulse was 130, respiration 50. No cardiac murmur could be heard, possibly on account of the loud friction sounds which were present throughout. On this day he became suddenly worse after a violent fit of coughing, was deeply cyanosed, and died of heart failure.

*Post-mortem.*—There was extensive acute pleurisy over the whole of both lungs. Nearly the whole of the right lung was in a state of red, passing in places into grey, consolidation, and the lower lobe of the left showed red hepatisation. The heart cavities were dilated, especially on the right side. On the mitral valves were some old granulations, and in addition on these and on the edge of the valve segments were numerous recent small granulations. Scrapings of the cut surface of the consolidated

lung showed numbers of pneumococci, which were also obtained from the recent granulations on the mitral valve. The other cardiac valves were healthy.

Endocarditis is not a common complication of pneumonia, in the form of which the preceding case is an example it often goes unrecognised. In this case there was no evidence from the previous history or symptoms of the old existing lesion of mitral valve, and, further, there were no signs of the acute endocarditis supervening on this old lesion of the valve during the fatal illness. Any mitral murmur during this illness would have been effectually concealed by the loud friction sounds. The low temperature throughout such a severe attack of pneumonia is an unfavourable symptom, indicating poor powers of resistance on the part of the patient. Endocarditis in pneumonia generally affects the left side of the heart, and the pneumococcus is usually the active agent. As to its frequency, Preble, from an exhaustive analysis of over 20,000 cases, gives it as 1 per cent. of all and 5 per cent. of fatal causes. Pneumococcic endocarditis is frequently accompanied by meningitis, so that cerebral symptoms may form the predominant feature of the illness. Both this and the following case illustrate the well-established fact that cardiac valves which are the seat of previous disease are especially liable to be attacked by the micro-organisms of any subsequent acute infection.

*Pneumococcic (Ulcerative) Endocarditis.*—Charles M., æt. 47, a clerk, had scarlet fever as a child, and at the age of 22 was told by a medical man that he had heart disease. Except for occasional attacks of palpitation he remained well, and was able to do his work until April, 1900, when he was laid up with fever, cough, and pain in the right side, and was treated for a "liver attack." After this he got about again, but felt weak, and six weeks before admission took to bed on account of increasing weakness. He had a rise of temperature every evening, with profuse sweats between 3 and 6 a.m. There were no other symptoms, except a slight attack of hæmaturia three weeks before admission, and a rash consisting of bright red spots over the legs.

On admission he looked ill, and was anæmic and sallow. The temperature was 102°; the pulse 96, collapsing; respiration 26. There was a fading purpuric rash on the legs.

On examination the breath sounds were harsh, the lungs otherwise normal. The heart was much enlarged, the apex beat



being two inches outside the left nipple. There was a marked diastolic thrill at the apex, and a loud systolic murmur there. At the base there was also a rough systolic murmur, followed by a long soft diastolic murmur conducted down the sternum. All the visible arteries showed marked pulsation, and capillary pulsation was also observed. The urine contained a little blood and albumin. The liver was slightly enlarged. The spleen was distinctly enlarged, its tip being felt about two inches below the lower border of the ribs. There were no retinal hemorrhages, and the optic discs were normal.

The temperature chart shows the irregular course of the fever, and the high range to which it reached. There were profuse nocturnal sweats. The symptoms and physical signs made the diagnosis of malignant endocarditis obvious. Blood was withdrawn from the veins of the arm on three occasions, in order if possible to ascertain the cause of the infection, but no micro-organisms could be recovered from it. At this time the history of the beginning of the illness, when he was treated for "liver complaint," did not have the significance which it afterwards obtained in the light of the pathological findings. In the absence of evidence of the organism present, it was thought advisable to try anti-streptococcic serum. Three brands of serum were employed, one of them being a polyvalent anti-streptococcic serum, and were given in doses of from 10—30 cc. In all 480 cc. were injected, so that a thorough trial of the serum was made. Neither of them had any appreciable effect either for bad or good, except for occasional local redness, infiltration, and tenderness at the site of injection.

He grew steadily worse, and on October 15th slight general anasarca and ascites appeared. This gradually increased, and œdema of the ankles was marked on October 22nd.

On October 26th there was thrombosis of the superficial veins of the right calf, and a fresh petechial eruption appeared over the left thigh and knee. The albumin in the urine increased. About this date he became much weaker and delirious at night. The heart's action became weaker and very irregular. The murmurs persisted as at first.

On October 30th there were signs of a little fluid in the pleural cavities and congestion of the bases of the lungs. He died on November 4th.

*Post-mortem.*—There was a large infarct into the upper lobe of right lung. The lower lobe of the left lung was completely airless, dark red, solid, and granular on section. The heart was greatly enlarged; both ventricles much dilated. On the auricular surface and free borders of the tricuspid valve segments were large masses of fungating, soft granulations, which extended on to the chordæ tendineæ. The mitral valves were much thickened and contracted, but contained no granulations. The pulmonary

valves were normal. Aortic valves were largely destroyed, one segment almost entirely, and covered by large masses of granulation tissue. Scrapings from the valves, from the spleen, and from the pulmonary lesions showed abundant pneumococci, which were also stained *in situ* in sections made of the granulation tissue on the cardiac valves. The kidneys showed subacute nephritis, and there were a few small hemorrhagic infarcts in the jejunum.

There was no ground for the employment of anti-streptococcic serum in this case beyond the fact that a streptococcus is the most common cause of malignant endocarditis, and in the failure of all attempts to determine the exact organism present, and in view of the grave character of the illness, it was thought right to act on the hypothesis that this organism might be present. It shows, however, the fallacy of employing any serum in the absence of exact evidence of the kind of organism causing an infective illness. Looking back in the light of the *post-mortem*, the "liver attack" of the preceding April was probably a mild attack of pneumonia, but the history was too inconclusive for us to be able to come to any such conclusion during life.

**Nephritis.**—E. P., *æt.* 10. The patient's mother was taken ill with pneumonia on May 13th, and her father on June 2nd. The patient's illness began on June 6th with pain in the side, cough, fever, sickness, and diarrhoea. She did not sleep in the same room with her parents. She was admitted to the hospital on June 13th. She had not passed any urine for forty-eight hours before admission, and what was passed just before this period of suppression was the colour of blood. She was delirious at night.

On admission the temperature was 103°, pulse rate 104, respiration 42. The tongue was thickly furred. On examining the chest, there was pneumonic consolidation of the lower lobe of the right lung. The heart's apex beat was in the fourth space, and the cardiac dulness extended half an inch over the right border of the sternum. There were no murmurs. There was no enlargement of either liver or spleen. A leucocyte count gave 28,900 to c.mm. A few ounces of urine were passed, which contained a large quantity of albumin, much blood, and blood and epithelial casts.

On June 15th—16th (ninth and tenth days of disease) she was delirious, with a temperature rising to 104°, pulse 112, respiration 44. The abdomen was swollen and tense; the urine showed the same characters as above. Pallor of face and puffiness of lower eyelids were marked.

On the eleventh and twelfth days of the illness the crisis occurred, and on the following days the affected lung showed signs of resolution. Respiration fell to 24, and pulse to 72.

On June 20th (fourteenth day of illness) urine contained blood; epithelial, blood and leucocyte casts, with crystals of uric acid; there was still a large amount of albumin. Quantity passed, 32 ounces; urea in 24 hours, 26.5 grms. A leucocyte count on this day gave 28,000 to c.mm., and on June 26th 20,400 per c.mm.

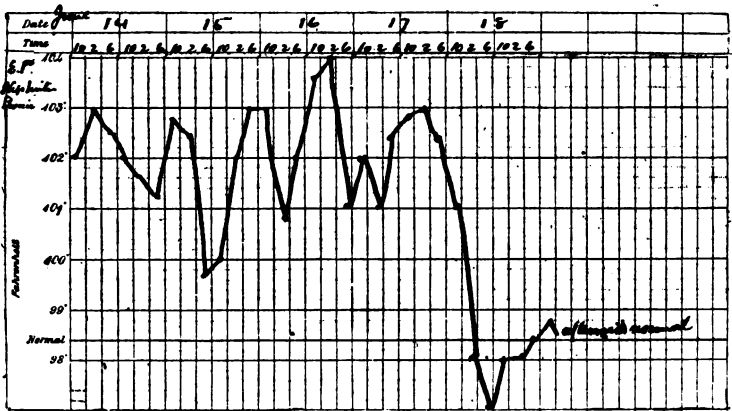
Between June 20th and 26th the daily quantity of urine was only 16 to 20 ounces; on the latter date its sp. gr. was 1020, with no blood, no casts, and only a small quantity of albumin. The lung continued to undergo normal resolution, and by July 9th the mischief there had cleared up. On this day examination of the urine gave: quantity 24 ounces; sp. gr. 1020; urea daily excretion about 15 grms. on a milk diet with one egg; a trace of albumin only; uric acid and calcium oxalate crystals, epithelial cells from urinary passages, and a few granular casts.

On July 17th and 24th the face was puffy, and there was still a trace of albumin in the urine; otherwise the child seemed well. At the end of this month the urine was passed in normal amount with a sp. gr. of 1020; it contained no albumin and no deposit, and she was discharged well on August 5th.

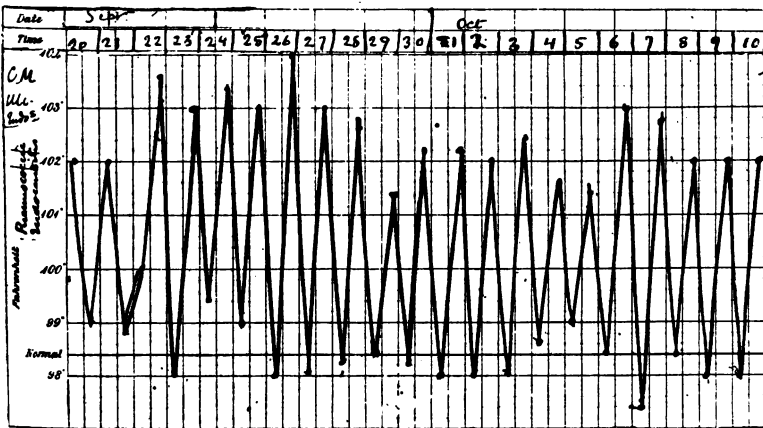
No pneumococci were found at any time in the urinary deposit. Nephritis is a very rare consequence of pneumonia. This is the only case I have ever seen. I think there can be no doubt of cause and effect in this case. In so completely and quickly clearing up, it followed the usual course of nephritis in acute infective disease. The case is a good instance of *infective* pneumonia, and in the infective form; the disease is well known to be more severe, more apt to be a general infection, and therefore to lead to complications.

**Pneumonia, Empyema, Arthritis.**—Victor R., æt. 8, previously healthy. On April 16th, 1906, patient fell into a pool of water; on the 17th pains in the right hypochondrium and side of chest, followed on 18th by cough and pains in the left arm.

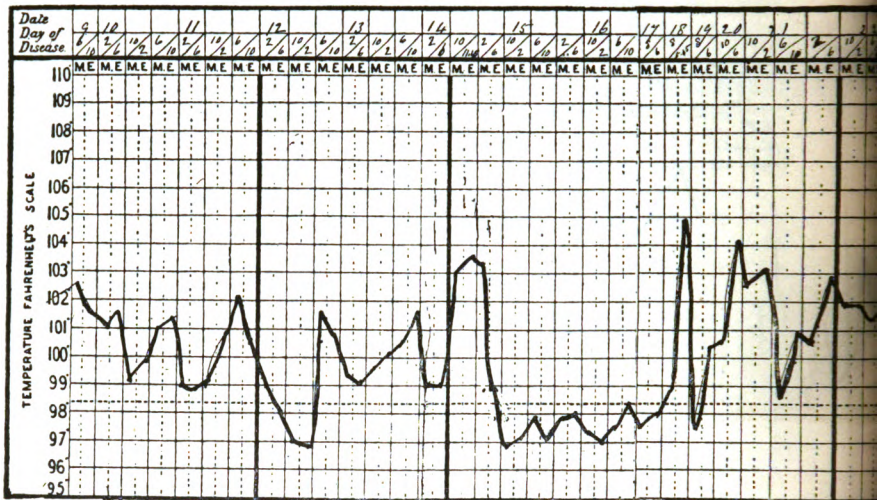
On 21st he was admitted into the hospital with a temperature of 102°, pulse 120, respiration 34. On examining the chest there was dulness, deficient air entry, a few moist crepitations, and increased vocal resonance over the base of the right lung. The other organs were normal. The left elbow-joint was swollen, red, and painful, and there was some fluctuation in the joint. On April 23rd there was a patch of bronchial breathing at the lower angle of the right scapula, otherwise the lung signs remained the same. The swelling of the elbow-joint also remained stationary; the pain was relieved by placing it upon a splint. The signs of



Case of Pneumococcic Nephritis.



To show range of temperature in case of Pneumococcic (Malignant) Endocarditis.



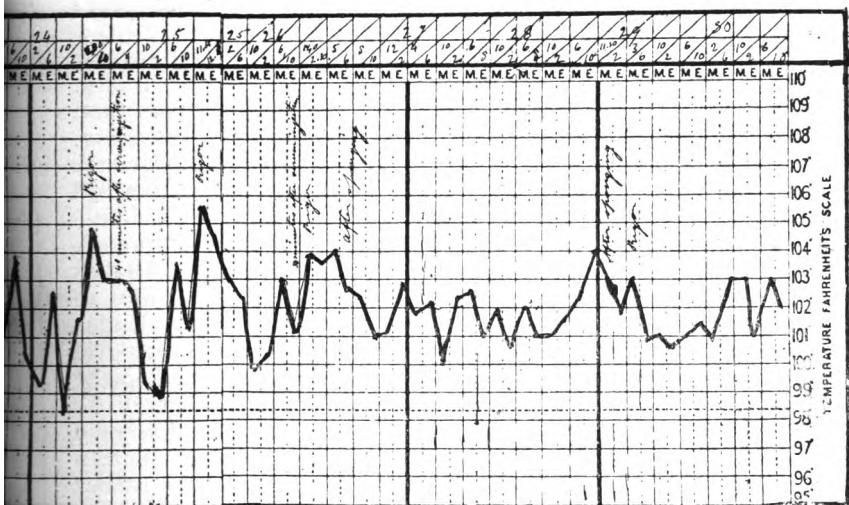
Temperature Chart. General Pne

an empyema having developed, on May 4th a portion of the eighth rib was excised, and a moderate quantity of thick yellow pus evacuated. The pus contained numbers of pneumococci. At the same time two incisions were made into the elbow-joint, but no pus found. On May 14th there was no pain in the elbow, and the swelling had much diminished, but the joint was stiff, with very little movement of flexion or extension, the former not beyond a right angle.

On May 17th the condition of the left elbow-joint still suggested the presence of pus, but none was found. The muscles of the arm were now much wasted, more especially the triceps. On the next day massage of the limb and gentle passive movements of the joint were begun. A curious feature of the case was the appearance of four or five large pustules on the left ankle and foot, which gradually died away, to be succeeded by a fresh crop on June 8th, which lasted until June 20th.

Another feature was that, although the empyema was opened and drained freely, and did well, the discharge gradually lessening, and there being no evidence whatever of retained pus, the temperature remained of a hectic type, ranging between  $99^{\circ}$  and  $102^{\circ}$ , for a fortnight after the operation before it returned to normal.

For the rest it is sufficient to say that the empyema wound healed about the middle of June, leaving a very good result as regards expansion of the lung, and that the swelling and stiffness of the joint gradually improved, so that when he left the hospital in July all movements were perfect and the joint appeared normal.



*Infection. Thrombosis of Vessels.*

## THE VALUE OF COMPRESSION OF THE AORTA IN THE TREATMENT OF POST-PARTUM HEMORRHAGE.

BY

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SINCE Mr. Stanmore Bishop<sup>1</sup> and Dr. Le Page<sup>2</sup> recently emphasised the value of compression of the aorta in post-partum hemorrhage, much discussion has taken place as to its practical utility. The following case occurred in private practice, and is of interest if only in regard to the value of compression of the aorta:—

Mrs. L., æt. 22 years. Third pregnancy. Previous pregnancies normal. The last child died at birth, owing to the umbilical cord being round its neck, proper assistance not being available.

The patient was well nourished and free from organic disease, but was of a highly neurotic temperament. There was no history

<sup>1</sup> *Practitioner*, 1906, lxxvii. 145.

<sup>2</sup> *Brit. M. J.*, 1907, i. 185.

of hæmophilia. No hemorrhage had occurred during pregnancy.

The present labour began on March 3rd and was preceded by sharp uterine hemorrhage shortly before the "pains" began. The patient was first seen at 9 p.m., and the state of affairs then was as follows: feeble and irregular labour pains, slight bleeding, os dilated sufficiently to admit one finger, lower margin of placenta overlapping os, position of fœtus normal, pulse normal, general condition of patient good.

At 11.30 p.m. on the same day profuse hemorrhage occurred. At this time labour pains were strong and frequent. The os admitted the tips of three fingers. The pulse rate had risen to 120. It was decided to turn and deliver the child. Under chloroform the os was gradually dilated with the fingers and hand, and the child turned and delivered. Delivery took place at 12.45 a.m., the child being alive and full term. Very little bleeding occurred during dilation and version, and ceased as soon as the first leg was brought down through the os. Immediately on delivery of the child sharp bleeding followed, and the uterus then began to show signs of inertia. The pulse rate had risen to 130 when the child was born, and with this further bleeding soon reached 140. Manual compression of the aorta, however, immediately stopped the bleeding, and with returning uterine contractions the placenta was expressed, and without difficulty, half an hour after delivery of the child. The uterine cavity was then explored and emptied of a few blood-clots. There were no placental remains. The cervix was not torn through. After the uterus was emptied, and a drachm of ergot and some nourishment were given, a little friction soon succeeded in getting the uterus firmly contracted. The general condition of the patient had, however, become very serious. Her pulse had risen to between 140 and 150, and was threadlike. She was very pale, and complained of coldness, faintness and nausea. She was quickly packed with hot-water bottles, covered with blankets, and her head lowered. As soon as nausea became less, more nourishment was given and retained. Compression of the aorta was relinquished soon after the uterus had become firmly contracted.

Three hours after delivery there was marked improvement in all the symptoms. The pulse had dropped to 120, was much stronger, and there was no faintness or nausea. The face had regained some colour, the patient was warm and had taken about half a pint of nourishment and retained it all. She complained chiefly of thirst and tiredness. The uterus was still firmly contracted, and no bleeding had occurred since compression of the aorta had been discontinued.

At 10 a.m. her condition again became very serious. Bleeding had returned shortly before this, and the uterus had become large and flabby. Alarming symptoms of shock were now present.

The pulse at the wrist was scarcely perceptible, and too rapid to be counted. The patient complained of being cold and faint, her body being covered with clammy sweat. She soon began to get very restless, and to throw her arms about and cry for air. She then suddenly became cyanosed, had a convulsion and became unconscious. An hypodermic injection of strichnine was immediately given, and in a few minutes consciousness returned, but lasted only momentarily, the patient relapsing into a comatose condition, her pulse now disappearing at the wrist and respiration ceasing. The uterus, which extended above the navel and was full of blood-clots, was in the meantime emptied and compressed through the abdominal walls. There was no response to stimulation, and no time was lost in applying pressure to the abdominal aorta. Respiration had just stopped when the aorta was compressed, and this blood-vessel could be felt pulsating feebly. Pressure was applied with the clenched fist through the abdominal walls and the uterus.

Respiration began again in less than a minute after the aorta was compressed. Subcutaneous transfusion of normal salt solution was then begun. While transfusion and compression of the aorta were being carried out, the patient's legs were elevated and firmly bandaged from the insteps to the groins, and a hypodermic injection of "ernutin" was administered. The head of the patient, already low, was further lowered by elevating the foot of the bed on two chairs. A pint of saline fluid was rapidly transfused beneath the skin of the inframammary region on one side, and a similar quantity in the same region of the other side. The site of injection was then changed to the right flank, as both inframammary regions were bulging with fluid, owing to rapid transfusion and slow absorption. The aorta began to fill out when about a pint of fluid had been absorbed, and before two pints of fluid had been absorbed the patient regained consciousness, and the aorta could be felt pulsating strongly against the fist. Coincidentally with the rise in blood-pressure, improvement in all the symptoms took place, the pulse reappearing at the wrist when between two and three pints of fluid had been absorbed. The patient then complained of being hot and thirsty, and soon began to perspire. As soon as consciousness was fully restored, friction and compression were applied to the uterus, and the relaxed organ then responded quickly, although these measures previous to compression of the aorta failed to produce contraction. Pressure was then applied through the abdominal wall directly on the aorta. For five hours life ebbed and flowed in a most remarkable way. During the whole of this time compression of the aorta was kept up continuously by my assistant and myself. After the pulse had reappeared at the wrist transfusion was carried on intermittently, as the tendency to relapse from shock threatened. At 6 p.m. the state of affairs had materially



improved. The pulse had got down to 130, and was fairly full. The uterus was firmly contracted, and had shown no tendency to relaxation again. Not a single drop of blood had escaped *per vaginam* since compression of the aorta had been applied, and the uterus had been finally got to contract, and this, notwithstanding the fact that the uterus had been repeatedly squeezed to ascertain whether any blood was escaping *in utero*. The patient complained now chiefly of pain in her legs due to constriction of the bandages, and also of great thirst and weariness. Since she had become conscious about 6 oz. of nourishment had been taken, and this had all been retained. Transfusion was entirely stopped at 6 p.m. During five and a half hours between ten and twelve pints of fluid were transfused. The needle was not removed from the flank until transfusion was finished, the receiver full of fluid being kept at the same level as the flank when transfusion was temporarily suspended. After removing the needle a piece of adhesive plaster was placed over the wound, about two pints of fluid being still unabsorbed when the needle was removed.

The legs of the patient were kept suspended for about half an hour altogether.

Between 11 and 12 p.m. the condition of the patient was eminently satisfactory. The pulse had got down to 100, and was strong and fairly full. The uterus was firmly contracted, and the diaper, which had been applied immediately after compression of the aorta and emptying of the uterus at 11.30 a.m., was unsoiled. All saline fluid had been absorbed. The patient had slept, taken and retained all nourishment, and had regained some colour. She complained, however, of great pain in her legs and of insatiable thirst. Otherwise she said she felt altogether better. The bandages were then very carefully removed, and save for pain and throbbing in her legs, no ill effects followed removal. The legs had been kept warm by hot-water bottles; the foot of the bed was still kept elevated. The patient was left about an hour after removal of the bandages, and from every point of view was in a very satisfactory condition.

What promised to be a remarkable recovery from post-partum hemorrhage and shock terminated unfortunately in a most unexpected and tragic manner. At 2 a.m., the patient craving for drink, and finding she was refused more than the prescribed quantity, watched her opportunity, and the nurses leaving her bedside for a moment, she sprang out of bed for some water on a table near, and fell in a collapsed state on the floor. In spite of everything, she soon succumbed to heart failure. At the time of death the uterus was still firmly contracted, and less than a tablespoonful of blood had escaped *per vaginam* since she was seen at midnight.

*Remarks.*—Although this patient died, the great value of

compression of the aorta was well illustrated. The immediate cause of death was undoubtedly heart failure consequent on the exertion in getting suddenly out of bed, and sudden heart failure is by no means uncommon, even after far less hemorrhage and shock than occurred in this case. Bleeding had ceased for nearly fourteen hours before the patient died, and at the time of death no further bleeding took place. Shock also was being rapidly recovered from.

It is quite obvious in the circumstances attending this case, at the time when compression of the aorta was adopted the second time, that none of the methods of treating atonic post-partum hemorrhage advocated in text-books could have been relied on here for rescuing the patient from immediate death. The patient must have died before plugging of the uterus or the application of perchloride of iron could have been performed, even if these means would eventually have stopped bleeding, a result which admittedly is not always obtained. Compression of the uterus itself in the manner advocated by Dr. Herman<sup>1</sup> would, if carried out continuously for some hours, have prevented further bleeding. But compression of the uterus by this method (which is undoubtedly the best) cannot be carried out continuously for any great length of time, a fact which Dr. Herman himself admits.<sup>2</sup> Further loss of even a small quantity of blood, as must have occurred in changing compression with an assistant and in again changing when the latter became tired, was a matter of vital importance during at least the four first hours that the aorta was compressed. During this period the patient repeatedly relapsed in spite of no bleeding taking place, and the uterus also relaxed from time to time. Had compression of the uterus been employed, unless the compression had taken place continuously for about four hours, further bleeding would have occurred, and the patient would have died very quickly.

Although immediate and continued control of hemorrhage was a *sine qua non*, prompt treatment of collapse from post-hemorrhagic shock was of equally vital importance. Plugging of the uterus, the injection of a styptic, compression of the uterus, not any of these would have remedied collapse quickly enough.

Compression of the aorta not only immediately stopped all

<sup>1</sup> *Practitioner*, 1907, lxxviii. 445.

<sup>2</sup> *Difficult Labour*, 1901, p. 336.

bleeding, but also immediately influenced shock by cutting off the blood supply in the lower extremities, and so increasing the amount of blood in the heart, lungs and nerve centres. Elevation of the pelvis probably contributed greatly in this case. By this procedure, not only was venous bleeding controlled, but the blood supply to the vital centres was also maintained. The *vis a tergo* in the arterial circulation being also diminished was an important factor in helping to prevent hemorrhage after compression of the aorta ceased. Saline transfusion subcutaneously no doubt assisted materially, but without compression of the aorta would have been useless, as even with the bleeding stopped absorption was at first extremely slow, and could not have occurred at all had the bleeding not been instantly checked. Intra-venous injection of saline fluid might have succeeded, but retention of blood-plasma was of far greater value in restoring energy than would have been the introduction of mere salt solution.

Of the objections raised to compression of the aorta in the recent discussion, all had to be considered in this case with the exception of obesity. The other objections put forward were the intervention of a large uterus, inability to maintain efficient compression of the aorta,<sup>1</sup> damage of the sympathetic nervous system, compression of the vena cava,<sup>2</sup> and injury to the uterine muscle from cutting off its blood supply *via* the uterine arteries.<sup>3</sup>

Although this patient was not obese, she possessed unusually well-developed abdominal muscles, and in addition was highly neurotic. When the hand was placed on the abdomen to feel the uterus, previous to giving the anæsthetic, it was impossible to define the outline of the uterus properly, so great was the rigidity of the abdominal muscles. The contrast after delivery, even after the effect of the anæsthetic had disappeared, was remarkable, and was still more so when death was impending. There was, therefore, no difficulty whatever in reaching the aorta when this became necessary, although the patient when she became conscious strongly resented the proceeding. The intervention of a large uterus did not in the least prevent compression being

<sup>1</sup> Fitzgerald, *Practitioner*, 1906, lxxvii. 652.

<sup>2</sup> Duke, *Brit. M. J.*, 1907, i. 290.    <sup>3</sup> Fitzgerald, *loc. cit.*

properly carried out, the uterus being as soft as "wet wash-leather." The fact that my assistant and myself were able to maintain efficient compression for five hours continuously is sufficient proof of the ability to maintain the necessary force long enough for effectually controlling hemorrhage. In changing compression the fist to be applied was always firmly applied on the blood-vessel below the other fist, and by this manœuvre no blood was lost in changing pressure. Injury to the sympathetic nerves, and compression of the vena cava were avoided in the one case by changing the point of pressure from time to time along the available part of the aorta, in the other by swaying the fist sideways before finally compressing the aorta. So far as could be discovered, no harm resulted in either direction.

In regard to the alleged injury to the uterus in interfering with its blood supply, quite enough blood was carried by the ovarian arteries for the nutrition of the uterine muscle, as the uterus contracted and retracted not long after compressing the aorta, and continued to do so up to the time of death. The fact that no bleeding occurred in spite of the blood-flow in the ovarian arteries continuing, proves the unimportance of considering these vessels as contributing to hemorrhage after labour.

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## EIGHTY CASES OF LUPUS VULGARIS.<sup>1</sup>

BY

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ONE of the most difficult problems in medicine is the correct estimation of the value of any new method of treatment which is not absolutely specific. Not only is enthusiasm liable to run riot at the incidence of a series of successful cases, but the reverse may also occur, and undue depreciation of the value of a useful method be engendered by an initial series of *unsuccessful* cases.

<sup>1</sup> Read before the Bristol Medico-Chirurgical Society, December 12th, 1906.

In attempting to make a personal estimate of the value of radio-therapeutic methods in the treatment of lupus vulgaris, several difficulties presented themselves at the offset.

It was claimed for the Finsen Light treatment that the rays which were curative in property were those rays of short but rapid wave-length in the blue and violet, and beyond the violet end of the spectrum. But it was soon shown that the penetration of these rays was of the smallest character, while I myself have shown that rays of the less therapeutic value in the spectrum pass with ease through the body. The first difficulty I met with was in choosing the cases which would be best suited for the treatment, out of the numerous cases which presented themselves at the department. For the most part these were of the most unpromising nature for any new method of treatment—the subjects of old-standing disease, in some cases over forty years in duration, with a history of numerous operations, many of whom presented deep and extensively scarred lupus of the integument with free involvement of mucous membranes.

Secondly, it soon became obvious that there were nearly as many types of the disease as there were patients to suffer from them. And success or failure in one case could hardly be claimed as experience in the next.

Thirdly, the patients were largely of the "night-bird" order, creeping out after night-fall or swathing up their disfigurements in light-proof veils and wraps, leading thus an unhealthy and unnatural existence, often in great want owing to the inability to obtain even the scantiest livelihood.

As an instance of how this factor has a bearing on the estimation of value of the treatment, I may cite the case of a man who was obtaining the scantiest livelihood by selling newspapers—his face always hidden under a scarf—poor to destitution, but independent. I attempted his relief by means of radio-therapy with no good result. Some years after I happened to meet him, and urged him again to come for treatment. He came, and in order to do so, went into the workhouse, and obtained there better diet, regime and attention. Instantly we obtained a most promising effect, and the amelioration is continuing in a most remarkable way.

Although aware of these difficulties, I thought that I would at first restrict the treatment of the exterior at any rate to the radio-therapeutic methods alone, and attempt to estimate the value *per se* of the radio-therapeutics as a specific. If some cases seem to have been a very long while under treatment, it must be remembered that until quite recently no other treatment was used in conjunction with the light, that many of these were old scarred cases, and some of them cases on which the Finsen treatment was merely wasted.

The first case of lupus was treated in the department in December, 1901. Up till the end of 1905 we have a record of over eighty cases of lupus. Besides these there have been not a few instances of other manifestations of cutaneous tubercular disease, such as scrofuloderma, tubercular abscesses, verruca necrogenica and the allied verrucous condition on the hands of butchers, which is in all probability tubercular. These might very well form a separate note, since they have been extremely ready to respond to radio-therapy, more so than lupus vulgaris, but I have omitted them from this collection.

The variations in type of lupus are numerous but not always well defined, one type merging into another according to the reaction of the patient to the disease. I have divided off the following:—

1. Extensive erythematous forms, spreading widely and rapidly at intervals, sometimes more or less symmetrical in position, depending upon unknown factors for their delimitation. Perhaps nerve areas are roughly mapped out; certainly the hairy areas seem to offer great resistance.

2. Nodular forms, with very slight erythema occupying one or more areas, with no suggestion of nerve area or symmetry; no tendency to ulceration, and of very slow growth.

3. Hypertrophic forms (lupus exedens), with high-raised granulation tissue, of rapid development and spread.

4. Ulcerative forms, where ulceration is the chief feature of the case, not merely an incident in the case.

5. Verrucous forms, indolent in growth, very chronic and resistant.

6. Oedematous forms, with lymph-stasis out of all proportion to the amount of disease, but the cutaneous exanthem showing definite "apple-jelly" nodules.

7. Sclerodermic forms.

As I have said, these types may overlap, it being difficult to classify some cases under any of these headings. But in general the case is true to its own type, whatever that type may be. If it is hypertrophic on the face, it will be hypertrophic on the hand; if nodular on the thigh, it will be nodular on the ear; and so on. It is rare to find also lupus in one patch while there is some indefinite scrofuloderma elsewhere. It would appear that the type of disease is the expression of the tissue resistance rather than the virulence of the strain. At the same time it is quite rare to find phthisis in a lupus patient. It is present in a very chronic fibroid form in three out of our eighty cases—3.75 per cent. Other forms of tubercle may be present, though not commonly. Tubercular dactylitis in three cases—3.25 per cent. Hip-disease (old) in one—1.25 per cent. Enlarged glands in several.

Lacrymal dacryocystitis and abscess is fairly frequent when the nasal mucous membrane is attacked. It is of interest to note how many patients with lupus of the face have attending infection of the nasal mucous membrane. Indeed it is not infrequent for the patient to admit having had a liability to epistaxis and coryza or blocked nostril for a long period before lupus has developed externally.

The various types behave differently to the radio-therapeutic measures. The extensive erythematous forms are very difficult to treat. It requires long-continued patient care to make any headway at all with the light, and with the X-rays many and frequent applications are necessary before the erythema dies away and scar tissue is revealed.

As soon as this paling of the area is observed, it will be noticed that broad bands of white supple scar tissue leave between them islands of erythematous material, which gives the diffuse staining characteristic of this kind of lupus through the diascopé. The X-ray treatment must be continued for a long while after this,

and it is this feature which opens up an avenue of danger in persons past the middle age. Long-continued X-ray treatment in a case where scarring is extensive, and is cutting off islands of inflammatory material, may be followed by the development of carcinoma. It is recognised that carcinoma may develop on an untreated lupus, the reparative processes of nature pursuing the same course, but there is obviously a danger of raising these undesirable statistics by the *too* rapid encouragement of this healing process. Epithelioma developed on the lip in one very extensive case of this form of the disease, and in spite of extensive removal, which Mr. Hey Groves was good enough to undertake, the patient went from bad to worse and died.

It is jumping to conclusions to state with any degree of definiteness that this was produced by the ray-treatment, but having watched the case for years there is a haunting conviction that the treatment was a contributory cause.

Perhaps one attempted to do too much. In the initial stages of the treatment the light produced a great amelioration of his distressing condition. Later, as the light did not seem to be curing any part, I added the X-rays. Improvement and the scarring of large areas was soon observed, and I was tempted to pursue the disease wherever any recent erythema showed itself, with this disastrous result.

On these cases an advancing edge of more resistant lupus is seen as a rule. In this edge most of the recurrences will be seen in cases which have done well, and it is necessary to treat again and again until no fresh developments arise. On this account it is impossible to call a case cured until years have elapsed.

The nodular forms without much erythema do well with the light as a rule. In some cases, however, the good results are slower to arrive than in others, and I have observed that the factor of general health is a large one. It would seem that the reaction to the disease in these cases is not sufficient to produce the desirable erythema, which is undoubtedly reparative. Even when this is artificially supplied the leucocytic invasion is not sufficient. One case of this order was of a very delicate strumous type, while a second had phthisis. In the first relief of the disease was



produced with some tendency to recur in spots, in the second very little could be done. One spot only seems to have disappeared, while others were removed surgically, being in places where the scars would not show. In cases where the general health is satisfactory what erythema is present at first dies away on the subsidence of that caused by the treatment, and the nodules pale till they are no more than the colour of freckles, and many disappear from view altogether. But it is not infrequent that nodules are left behind, inveterate and persistent, and which only the longest course of treatment might be expected to relieve. On the other hand, the nodules are clearly demonstrated as the focus of the disease, and the simple and not very painful process of stabbing them with a pointed match-stick dipped in pure carbolic acid will get rid of them, even if it leaves behind small pitted scars. This is the course I adopt now when I have to deal with any of these inveterate and chronic cases. It may certainly be claimed for radio-therapy that it decreases the amount of the area to be treated with caustics eventually, while in many cases of these inveterate forms it relieves without resort to caustics at all.

In the hypertrophic forms it is seen at once what an enormous advantage radio-therapy can offer. With the large masses of granulation tissue exuberant, foul and greatly disfiguring, the temptation to remove the whole with the sharp spoon is almost irresistible. If this is performed great loss of tissue with irregular deep scarring will occur, whereas the X-rays soon have a marked effect upon the granulations, levelling them down to the skin, and leaving a scar in no way particularly noticeable except for occasional development of telangiectatic vessels, which have in a few cases made a permanently red colouration of the scar. This is possible after any prolonged X-ray treatment, and not dependent on the kind of disease treated.

After the X-rays have reduced the hypertrophied granulation masses, there may appear ordinary lupus nodules which persist. These are not as a rule difficult to deal with, either by continuing the rays or with the light lamp.

The good effect of a course of the rays will continue for a long

while after the rays are stopped. It is my practice to go very slowly in these cases, to prevent if possible the development of telangiectases by too rapid treatment. The result, as proved by time, seems to be very satisfactory as far as my experience goes ; but if ever any part begins to develop, for instance at the edge of a patch or in a fresh part of the body, the production of granulation material is extraordinary in its rapidity and amount.

In the ulcerated forms we have again an opportunity for the X-rays to show an advance in therapeutic methods. Large, deep and very chronic ulcers yield to their influence without added loss of tissue or the contractures which might be expected. Not only do they heal, but they remain healed. In very extensive cases of the disease, where little else could be accomplished, the complete healing of the sores has led to comfort and material well-being of the patients. This good result can be obtained on the mucous membranes as well as on the skin, provided the parts can be reached by the rays without an undue exposure of nearer parts. It is not advisable to treat the recesses of the nose with the rays from an X-ray tube, as the tip and alæ of the nose will show evidences of an overdose before good results can be obtained internally. The common site of perforation and ulceration within reach of the finger can be so treated and effectually. For internal use X-rays can be applied by means of high frequency vacuum tubes, which emit X-rays. I have tried this method with only partial success.

In verrucous forms there is a hard, warty growth of the corneous layer over each of the lupus nodules. The rays cause the corneous layer to shed, and the nodules exposed thereby are more easily dealt with, by other methods if desired, or by the continuation of radio-therapy. Some very good results have occurred from X-rays alone.

In œdematous forms the X-rays cause the œdema to subside, and in this particular I think they supersede all other forms of treatment. Occasionally the lymphstasis is out of all proportion to the apparent amount of lupus present. The lips, if involved, hang pendulous and unprotected ; they ulcerate and become useless. The leg, if involved, looks as if the subject of

elephantiasis ; but the œdema subsides and lupus nodules, which previously were not obvious, become visible and can be treated.

In sclerodermic, hard and indurated forms, the X-rays soften the induration, heal any incidental ulcers, and, as far as my experience goes, the results are lasting.

*Conclusions.*—For the most part I have obtained better results with the X-rays than with light ; but I believe that the Finsen lamp is the better radio-therapeutic agent for nodular lupus, while the X-rays are better for hypertrophic, ulcerated, verrucous and sclerodermic forms.

Recurrences occur in this as in other treatments, and the cases must be jealously watched at intervals after they are discharged relieved. But it can be claimed that there is not the loss of tissue attendant upon the other treatments, and consequently not a tithe of the disfigurement resulting. On the parts of the body beneath the clothing, where possible, excision is probably the best available as well as the most rapid method. On the parts that show, radio-therapeutic measures, supplemented by carbolic acid puncture if required, will give slow but the best results.

#### ANALYSIS OF EIGHTY CASES OF LUPUS VULGARIS.

|  |             |
|--|-------------|
| 1. Patients in whom spots have been relieved, with no recurrence in situ, though lupus may be present in mucous membranes, or on other parts of the body .. .. . | 20 = 25%    |
| 2. Patients discharged with great improvement .. .. .  | 15 = 18.75% |
| 3. Discharged with some improvement (ulcerations healed, &c.) .. .. .  | 9 = 11.25%  |
| 4. Improved ; still under treatment .. .. .  | 11 = 13.75% |
| 5. Ceased treatment prematurely .. .. .  | 8 = 10%     |
| 6. No improvement .. .. .  | 6 = 7.5%    |
| 7. Recurrence after apparent relief .. .. .  | 3 = 3.75%   |
| 8. Fresh development in vicinity of healed patch .. .. .   | 2 = 2.5%    |
| 9. Dead .. .. .  | 6 = 7.5%    |

| NAME. | AGE. | FIRST TREATMENT. | LAST TREATMENT.   | NATURE OF TREATMENT.                      | POSITION.  | RESULT.  | NOTES.   | CLASS. |
|-------|------|------------------|-------------------|---|--|--|--|--------|
| E. H. | 21   | Dec., '01        | X-rays, Mar., '03 | Light, examined by X-rays later. ac. lac. | Nose, upper lip, cheeks, nose ulceration, contraction, ulceration of upper lip, gums, palate | Relieved   | Nodular type, no previous suggested treatment. New nose by Mr. Groves            | I.     |
| W. R. | 17   | Dec., '01        | Jan., '04         | Light and X-rays                          | Nose, ala and tip; right hand, back, left arm by elbow, left foot                            | Relieved mainly                                  | Erythematous type mainly. Now returned with a patch on elbow. Had a burn on foot | VIII.  |
| F. B. | 20   | Dec., '01        | Feb., '02         | Light only                                | Left cheek, patch size of a sixpence   | Relieved   | Nodular; one year duration only  | I.     |
| W. H. | 15   | Dec., '01        | July, '04         | Light, few X-rays                         | Face, entire; ears, neck, extending to chest and shoulders                                   | No improvement                                   | Ten years duration. Erythematous type; couldn't tolerate X-rays                  | II.    |
| V. H. | 19   | Dec., '01        | Feb., '02         | Light only                                | Tip of nose, m.m. in nose  | Well, except ulceration internally               | Nodular  | I.     |
| M. H. | 40   | Dec., '01        | 1906              | Light X-rays, ac. carb.                   | Nose, face generally   | Great improvement with disfigurement             | Nodular; a very long-standing, deep infection                                    | II.    |
| E. H. | 27   | Dec., '01        | Jan., '06         | Light                                     | Face, nose, lip  | Improved, but no permanence in some patches      | Phthisis, nodular; pitting and scarring  | III.   |
| E. H. | 52   | Dec., '01        | Mar., '05         | Light                                     | General on face  | Dead of carcinoma mammae subsequent to operation |  | IX.    |
| E. M. | 7    | Jan. '02         | Nov., '06         | Light mostly, some X-rays                 | Right cheek, left thigh  | Healed face and thigh, recurrent                 | Nodular since infancy; recurrence on edge of scar of thigh                       | VII.   |
| J. D. | 53   | Jan., '02        | Oct., '02         | Light                                     | Bridge of nose   | Healed, but not sound                            | in Erythematous  | III.   |

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| NAME. | AGE | FIRST TREATMENT. | LAST TREATMENT.                            | NATURE OF TREATMENT.      | POSITION.  | RESULT.  | NOTES.   | CLASS. |
|-------|-----|------------------|--|---------------------------|--|--|--|--------|
| J. W. | 32  | Jan., '02        | Oct., '06                                  | Light and X-rays          | Whole face ; neck to chest                               | Dead of carcinoma, angle of mouth, after operation by Mr. Groves for removal, and plastic to lip | Erythematous variety, very long duration and extensive. Improved under treatment considerably        | IX.    |
| E. B. | 56  | Jan., '02        | July, '06                                  | Light and X-rays          | Face, entirely ; ears                                    | Improved, but fails to check development   | Nodular and pigmented ; very deep. Nose plastic by Mr. Greig Smith, affected now                     | III.   |
| A. L. | 37  | Jan., '02        | Apl., '04                                  | Light, X-rays, radium     | Right cheek, extending over nose                         | No improvement   | Erythematous ; absolutely nothing was done for this case by any form of treatment. 25 years duration | VI.    |
| M. B. | 19  | Jan., '02        | Jan., '04                                  | Light, X-rays             | Tip, and right side of nose, right cheek, left upper lip | Relieved   | Hypertrophic   | I.     |
| M. G. | 19  | Jan., '02        | Nov., '02                                  | Light                     | Beneath chin, and jaw both sides                         | By letter from S. Africa, "keeping well"   | Nodular  | II.    |
| M. B. | 31  | Jan., '02        | Recent                                     | Light                     | Left cheek, right chin, eyelids                          | Recrudescent spots   | Nodular ; many operations previously   | IV.    |
| B. B. | 36  | Jan., '02        | May 7th '02, returned during last few days | Light no good ; 18 X-rays | Huge ulceration of alae, septum and upper lip            | Well within reach of rays, but m.m. beyond uncertain   | Left prematurely, but good effects went on for a long while afterwards                               | IV.    |

|        |    |           |               |  |       |  |                                     |                                 |  |      |
|--------|----|-----------|---------------|--|-------|--|-------------------------------------|---------------------------------|--|------|
| J.E.B. | 70 | Feb., '02 | Jan., '03     | Light  | .. .. | Left cheek and nose                                | Improvement                         | .. ..                           | 7 years' treatment.  | V.   |
|        |    |           |               |  |       |  |                                     |                                 | Erythematous; left prematurely owing to illness at home                                |      |
| P. R.  | 20 | Apl., '02 | May 30, 1903  | Light, X-rays, ac. lactic m.m.                               | .. .. | Right cheek, upper lip and gums                    | Well                                | .. ..                           | Dactylitis operation   | I.   |
| J. L.  | 17 | Mar., '02 | Jan., '03     | Light, no imprvmt.   | .. .. | Whole face   | .. ..                               | .. ..                           | Hypertrophic   | IV.  |
|        |    | Feb., '05 | Present       | X-rays   | .. .. | Neck   | .. ..                               | Great improvement               | Great destitution at first; Jan. '03, no improvement; then workhouse, Feb. '05         |      |
| W. P.  | 9  | Apl., '02 | May, '03      | Light  | .. .. | Face   | .. ..                               | Some improvement                | Great improvement.   | V.   |
|        |    |           |               |  |       |  |                                     |                                 | Left prematurely; nodular type   |      |
| H. S.  | 4½ | Apl., '02 | Aug., '04     | Light only   | .. .. | Right cheek  | .. ..                               | Two small recurrences           | Nodular  | VII. |
|        |    | Apl., '06 | July 7th 1906 |  |       |  |                                     |                                 |  |      |
| E. L.  | 40 | Apl., '02 | Mar., '05     | Light, radium, X-rays  | .. .. | Whole face   | .. ..                               | Practically well                | Great scarring through operation; ulceration, destruction of nose, great disfigurement | II.  |
| R. A.  | 46 | Apl., '02 | Sep., '03     | Light and X-rays   | .. .. | Nose, m.m.; whole face                             | Improvement                         | .. ..                           | Ulcerations 12-14 yrs., operation 11-12 times, attended irregularly                    | VI.  |
| G. F.  | 14 | Mar., '02 | June, '04     | Light, X-rays, ac. lactic                                    | .. .. | Tip of nose, extending from m.m., involved heavily | Well externally, but internally not | .. ..                           | Nodular, externally; m.m. involved to back of pharynx                                  | I.   |
| M. W.  | 23 | Feb., '03 | Jan., '05     | Light, ac. lactic, int.                                      | .. .. | Tip of nose, m.m. nose                             | Cured externally, not internally    | .. ..                           | Patches scraped  | I.   |
| S. N.  | 59 | Mar., '03 | Sep., '03     | Light only   | .. .. | Both cheeks and nose                               | As bad as ever, Nov., '06           | .. ..                           | .. ..  | VI.  |
|        |    |           |               |  |       | 13-14 patches                                      |                                     |                                 |  |      |
| O. L.  | 17 | Mar., '03 | Apl., '04     | Light. Permang. pot. painting; to increase Rn. X-rays at end | .. .. | Thigh, neck, ear                                   | .. ..                               | Some improvement when last seen | No answer to card  | III. |

| NAME. | AGE | FIRST TREAT-<br>MENT. | LAST TREAT-<br>MENT.                      | NATURE OF<br>TREATMENT.   | POSITION.  | RESULT.   | NOTES.  | CLASS. |
|-------|-----|-----------------------|---|---|--|---|---|--------|
| C. P. | 65  | Apr., '03             | May, '04                                  | Light, X-rays at<br>4 X-rays, end<br>May, '05                             | Left side face, under<br>chin                                    | Improvement . . . . .   | Scarring variety . . . . .  | III.   |
| E. W. | 36  | Apr., '03             | Aug., '03                                 | Light only (Pyro-<br>gallic ac. carbol.<br>to increase Rn.)               | Left forefinger . . . . .  | Well . . . . .  | Well Nov., 1906 . . . . .   | I.     |
| E. B. | 57  | May, '03              | Mar., '05                                 | X-rays mainly   | Both cheeks, under<br>chin, extensive                            | Great improvement, most<br>of it cured  | Slight burn, right<br>cheek, with slight<br>telangiectasis  | III.   |
| F. Y. | 26  | May, '03              | June, '04                                 | . . . . .   | Centre of right cheek  | Improvement, ? well ;<br>writes sometimes, place<br>hardly noticeable ; gets<br>red at times, except at<br>upper part | Nodular L. . . . .  | III.   |
| A. F. | 21  | May, '03              | Rec'tly<br>to ankle<br>(ac. car-<br>bol.) | Light and X-rays<br>ac. carbol. and<br>X-rays ankle                       | Extensive on cheeks<br>right wrist, ankle                        | Face probably well, wrist<br>a little doubtful in one<br>part. Ankle too recent                                       | Nodular, L. . . . .   | I.     |
| E. B. | 21  | June, '03             | Rec'tly                                   | Light to Jan., '03,<br>X-rays after, ac.<br>carb. to recurrent<br>nodules | Cheek and nose . . . . .   | Excellent, though one or<br>two spots are uncertain<br>very bad   | Lupus Hypertrophicus,<br>very bad   | III.   |
| M. D. | 34  | Aug., '03             | Aug., '03                                 | Ceased attendance<br>after three weeks                                    | . . . . .  | . . . . .   | . . . . .   | V.     |
| C. F. | 31  | Aug., '03             | Aug., '05                                 | X-rays . . . . .  | Thumb . . . . .  | Healed, Nov., 1906 . . . . .  | Verrucous . . . . .   | I.     |
| C. H. | 23  | Oct., '02             | Rec'tly                                   | Light, X-rays, ac.<br>carb. to promote<br>H.F. internally                 | Extensive on face,<br>cheeks, lip, nose,<br>eyelids ; in.m. nose | Healed mainly ; some<br>doubtful points persist<br>in eyelids and on cheek<br>Well at present. . . . .                | Was scraped 11 times<br>before light treat-<br>ment ; nodular type<br>Nodular typc. Recurred<br>Jan., '06, after apparent<br>relief since May, 1904 | IV.    |
| F. L. | 28  | Oct., '02             | Mar., '06                                 | Light only . . . . .  | Centre right cheek,<br>size of half a crown                      | . . . . .   | . . . . .   | I.     |

- M. B. 42 Oct., '02 Jan., '06 Light only . . . Extensive left cheek Well, except for fresh development in left eyebrow . . . VIII.
- H. M. 10 . . . . . IX.  
 E. G. 27 Dec., '02 Feb., '04 Light at first, then X-rays only . . . . . Edema has improved so much that he can walk freely. A few scattered L. nodules present, for which he has returned for treatment . . . . . Edematous type, very slight appearance of nodules . . . . . IV.
- C. B. 26 Dec., '02 Mar., '05 X-rays mainly . . . Checks, nose, chin, neck to clavicles . . . Great improvement . . . . . A very severe nodular case, with a few ulcerations . . . . . II.
- A. L. 47 Jan., '03 Nov., '03 Light only . . . Right cheek, extensive under chin, right forearm . . . Practically nil. Improvement at time apparently considerable . . . . . Very extensive in various parts of body. On returning home fresh developments in parts previously untouched . . . . . VI.
- C. T. 67 Mar., '04 July, '04 X-rays mainly . . . Remains of nasal cartilages and septum, face extensive, cheeks and forehead . . . . . Ulcerations healed . . . . . Very ulcerated; nose gone . . . . . II.
- M. A. S. 60 Mar., '04 Aug., '05 X-rays . . . . . Huge ulcer right cheek, nose ulcerated in three places; right ear, cheek and nose . . . . . Ulceration healed, and remaining so . . . . . "no further spread." Ulceration very extensive, ulcers several square inches in extent. Hip dis-ease at 14. lameness. Blind right eye. Erythematous variety . . . . . II.



| NAME. | AGE | FIRST TREATMENT. | LAST TREATMENT. | NATURE OF TREATMENT.                        | POSITION.  | RESULT.  | NOTES.  | CLASS.      |
|-------|-----|------------------|-----------------|---|--|--|---|-------------|
| M. H. | 34  | Apl., '04        | Oct., '04       | X-rays                                      | Nose, tip; left foot, dorsum and sole of 3rd toe, and metatarsal and on shin | Nose well, foot recurrent                                  | Verrucose, nodular, ulcerated. 2nd toe removed by Mr. Groves before '04 and scraping; 3rd toe removed by Mr. Groves before July, '06; duration 20 years on face. One spot healed under Dr. Harrison's double lotion treatment. Recurrence in foot | I., IV.     |
| K. J. | 57  | Apl., '04        | Nov., '05       | .. .. .                                     | Very extensive on face   | Great improvement, and this still continues (Dr. Harrison) | Nodular type  | .. .. . II. |
| W. B. | 34  | June, '04        | June 6, 1906    | Light and X-rays                            | Ulceration of septum, nose and alæ, and upper lip; thickening of upper lip   | Well .. .. .   | Nov. 18th, '04, seemed well; slight indefinite recurrence, April 7th, '06, which yielded readily  | I.          |
| C. J. | 65  | June, '04        | Oct., '05       | Light and X-rays                            | Over whole face; ulcerated .. .. .   | Ulcerations well, and keeping so; nodules do not disappear | Nodular type. Has recently returned for treatment. Nodule no longer confluent; very discrete now.   | IV.         |
| J. D. | 57  | June, '04        | Sep., '06       | X-rays only; coc. and lactic ac. internally | Edges of nostrils ulcerated, m.m. involved                                   | Healed externally, doubtful internally                     | Ulcerated type. Lives in country; occasional return   | II.         |

|       |    |           |                          |                              |  |  |   |      |
|-------|----|-----------|--------------------------|------------------------------|--|--|---|------|
| W. C. | 21 | July, '02 | Mar., '05                | Light and X-rays             | Face, and below chin on neck                           | Improvement to skin  | Nodular type. Tubercular spinal (cervical) caries   | II.  |
| L. G. | 1  | Jan., '04 | June, '06                | Light at first, X-rays later | Shin and elbow   | Improvement . . . .  | Nodular . . . .   | II.  |
| B. H. | 74 | Apr., '04 | Nov., '05<br>1 or 2, '06 | X-rays . . . .               | Face. . . . .  | Two ulcers healed entirely, at angle of mouth not quite healed | Chronic ulceration for years  | II.  |
| F. W. | 3  | Sep., '04 | July, '05                | Light only . . . .           | Small patch, right cheek                               | Healed . . . . .   | Nodular type . . . .  | I.   |
| E. C. | 20 | Sep., '04 | July, '06                | Light, X-rays later          | Under ears and chin                                    | Some improvement possibly                                      | Very scaly, nodular and erythematous ; very resistant to treatment  | VI.  |
| A. S. | 25 | July, '04 | Sep., '06                | Light no good, X-rays        | Neck . . . . .   | Improvement with X-rays  | L. Nodules round scar on neck. Light use- less, owing to soft parts ; no pressure possible  | IV.  |
| M. M. | 60 | Nov., '04 | May, '05                 | X-rays only . . . .          | Checks and nose, extensive                             | Improvement . . . .  | Nodular type  | III. |
| W. W. | 20 | Feb., '05 | Mar., '06                | Light and X-rays             | Face, eyelids, checks ; extensive deficiency in septum | Much improved. Few spots not well                              | Very scarred ; has had X-rays in London with burns, with improvement '01 and '02. Scraped 8 times, 5 years since last scraping. Radium was tried without effect | II.  |
| E. W. | 30 | Jan., '05 | Aug., '06                | X-rays, ac. carbol.          | Face, nose, lip, right temple, under chin, left cheek  | Great improvement, one or two spots left only                  | Increased T.V.F. right apex, no <i>ratles</i>   | IV.  |

| NAME.   | AGE | FIRST TREAT-<br>MENT. | LAST TREAT-<br>MENT. | NATURE OF TREATMENT.                           | POSITION.   | RESULT.  | NOTES.   | CLASS.     |
|---------|-----|-----------------------|----------------------|--|---|--|--|------------|
| E. B.   | 9   | Feb., '05             | ..                   | Cauntry and ac. carbol. only; no radio-therapy | Chest and neck  | .. Chest well, neck no improvement   | Nodular patches small  | IV.        |
| M. B.   | 22  | Mar., '05             | Present              | X-rays only. Ac. carbol. increased reactions   | Backs of both hands, and feet, inner side arm, under chin | Very great improvement, but fresh place on arm developed since rest period | Hypertrophic   | .. . . IV. |
| P. H.   | 5   | Apl., '05             | June, '06            | X-rays, ac. carbol.                            | Cheek and jaw   | .. Healed; hardish still on jaw  | Lupoid   | .. . . I.  |
| H. P.   | 23  | May, '02<br>Nov., '06 | Sep., '03            | Light, X-rays lately ac. lactic                | Margin of nose, m.m., left cheek                          | Nose healed, cheek not   | Ulcerated, nodular; left, but failed to report; has returned with cheek diseased again | V.         |
| M. B.   | 36  | May, '02              | Sep., '04            | Light, X-rays and ac. lactic                   | Tip of nose, m.m.   | .. Externally well, m.m. not   | Nodular, m.m. scraped lately   | I.         |
| J. McC. | 18  | May, '02              | ..                   | ..   | Ulceration; mouth, eyes                                   | Nearly well  | .. . . Died of Emyema; very undersized and poor; workhouse child                       | IX.        |
| J. M.   | 54  | July, '02             | May, '05             | Light and X-rays                               | Tip of nose and alæ                                       | Well   | .. . . Very ill with cholelithiasis, nodular type                                      | I.         |
| S. A.   | 58  | July, '02             | Oct., '03            | Light and X-rays                               | Face and nose ulcerated                                   | Great improvement  | .. Dead of renal disease. "No trace of disease on face at death."                      | IX.        |
| H. P.   | ..  | ..                    | ..                   | ..   | ..  | ..   | .. Discharged for irregularity of attendance   | V.         |
| F. P.   | 18  | July, '02             | July, '04            | Light, very few X-rays                         | Face and nostrils   | .. Seemed well on face   | .. Operated previously; dead of acute nephritis  | IX.        |

|       |              |           |   |    |   |   |    |   |      |
|-------|--------------|-----------|---|----|---|---|----|---|------|
| F. H. | 30 Aug., '02 | Oct., '02 | Light only  | .. | Face, entire; lips enormous and ulcerated | Improvement, some   | .. | Too short a stay for lasting improvement                                    | V.   |
| M. B. | 15 Aug., '02 | Dec., '05 | Light and X-rays                                    | .. | Face, buttock, arm                        | Well on face and buttock; one small recent suspicious spot on arm | .. | Hypertrophic; worst case. L. Scleroderma on buttock; dactylitis, both hands | I.   |
| A. L. | 60 Aug., '02 | Dec., '02 | Light   | .. | Face                                      | No relief possible  | .. | Left too soon for any result  | V.   |
| B. H. | 13 Sep., '02 | Mar., '05 | X-rays, ac. carb. Recent ext. nose examination, '06 | .. | Nose                                      | Ulcerated nose cured, recent lupus on side of nose                | .. |   | I.   |
| F. R. | 32 Apl., '05 | July, '05 | Light, ac. lactic ext.                              | .. | Lip, m.m., nose                           | Healed externally   | .. | M.m. improved   | I.   |
| J. H. | 29 May, '05  | July, '06 | X-rays, light later                                 | .. | Neck                                      | Improved and cured  | .. |   | II.  |
| A. R. | 10 May, '05  | Aug., '05 | X-rays  | .. | Nose, lip                                 | Great improvement   | .. | Nodular   | VII. |
| E. W. | 59 May, '05  | Nov., '05 | X-rays  | .. | Face, nose, m.m.                          | Recurrence  | .. | Nodular, face, m.m. improved  | I.   |
| C. D. | 22 Aug., '05 | May, '06  | Light and X-rays                                    | .. | Front of right ear and under chin         | Apparently well; doubtful   | .. | Phthisis and anæmia; nodular  | II.  |
| W. V. | 30 Sep., '05 | May, '06  | Light only  | .. | Left cheek                                | ? well, looks so  | .. | Left too early, and any improvement lost.                                   | V.   |
| L. J. | 29 Oct., '05 | Apl., '06 | Light mainly, X-rays                                | .. | Left cheek                                | No disease visible, Nov., 1906                                    | .. | Vertigo B.G.H. great irritation; nodular                                    | II.  |

## A CASE OF NARCOLEPSY.<sup>1</sup>

BY

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By narcolepsy I wish you to understand a condition in which a patient, with almost lightning-like rapidity, falls into a sleep of short duration, the condition not being one of epilepsy.

The patient in whom I observed this condition was a young lady, unmarried, of about 30 years of age. She comes of a highly neurotic stock, chiefly, however, on the mother's side. In the maternal family there are two brothers, one of whom took his own life, while the other is a confirmed dipsomaniac. In a married sister's family there is a daughter in an asylum, a son with disseminated sclerosis, another son who wanders about the world unable to settle to any definite work, but always expecting to make a fortune by some hare-brained scheme, such as a mule service between Suakim and Khartoum; another sister died of Addison's disease, and a son, after an unfortunate circumstance connected with the firing of big guns, became a hopeless nervous wreck and shot himself. In the patient's own family there are no such strong evidences of the neurotic taint, but her sisters are all of a mild neurotic type, requiring rest cures at various times for conditions produced by slight mental stress. The general health of all is good, though not robust, and their mental activity is good, all taking part in social and some in philanthropic work.

The subject of this paper is, perhaps, the most intelligent of the daughters. She has attended various courses of lectures on science or literature, takes in what she hears, and has composed short stories and plays of quite a fair standard of excellence. They are not brilliant literary efforts, but I wish to point out that her intellectual powers are not deficient; on the contrary, she is actively and constantly employed in some mental exercise,

<sup>1</sup> Read at a meeting of the Society, December 12th, 1906.

of a nature rather above the usual standard of young women who have not to earn their own living. Her general health is good, menstrual functions normal, and her visual defects have been corrected with glasses.

The first symptom noticed and complained of was occipital headache. She told me that it seemed as if someone was attempting to lift her up by her back hair. I may mention that she has a great profusion of hair: not only is it long, but extraordinarily thick; in fact, it must seem to some of us who have little of that ornament that the amount of hair many women carry must be of great weight, especially when the arrangement of it is assisted by puffs of various kinds. These headaches as a rule came on in the morning, soon after or at waking, and lasted till midday, when they disappeared. They were very intense while they lasted, necessitating a darkened room and absolute quiet in bed. There never was any vomiting, and the retinae presented no changes. After the headache, the patient was quite well for the rest of the day; could go out for a walk, or bicycle a short distance, though a greater effort might bring on a return of the head trouble. After a week or two of almost daily headaches sudden short lapses into sleep began. What I observed was that on talking to her she suddenly stopped talking, her eyelids slowly closed after twitching slightly or screwing up of the lids, her hand went to the back of her head, the movement being as if she was in pain, and then with a slight turn of her head to the right she was fast asleep. After a few minutes, or even less at times, she opened her eyes, blinked a little, and went on with the conversation where she left off, seldom if ever losing the thread of her conversation. On waking she was sometimes rather excited in manner, but was evidently quite ignorant of her lapse into sleep. This sudden falling asleep might take place two or three times in the quarter of an hour or more that I saw her, sometimes in the middle of writing or drawing something, or even while eating. This, I was told, would continue all the morning, sometimes with headache, sometimes without, but nearly always she had a heavy sleep for an hour or two in the afternoon. By the evening she had nearly

thrown off the condition, but might occasionally go off suddenly while at dinner. She slept well, almost too heavily, at night. After a few weeks of this condition she began to lose flesh, and her digestion got out of order. Not unnaturally, her parents got rather alarmed, not only about her present state, but for the future, and though I was able to assure them that there was no evidence of serious mischief at the time, I was rather anxious for the future. After a couple of months of varying degrees of somnolence she began to improve, the first symptom that began to give way being the headaches: these got less in intensity and in frequency. Her parents then took her to London to see a distinguished psychologist, but unfortunately she slept and could not be aroused the whole time he was there. A short time before going to London a new symptom began to show itself—pain in the left iliac region, with a sort of spasm when the somnolent state came on. A change of treatment was suggested by the London physician, but did not appear to make much difference, the trouble slowly but surely improving. When her condition allowed her to be about more, she went abroad with a sister and nurse for three months, returning quite well, having lost all pain, all tendency to sleep at wrong times, and having put on flesh to her normal condition.

The patient continued quite well for over two years, went about in society without anyone noticing that anything had been the matter, and resumed her ordinary occupations and studies, in which she showed considerable aptitude, following them with diligence and with considerable intelligence. In fact, apart from the inherent neurotic condition, she was quite well.

The liability to narcolepsy was not, however, entirely eradicated, and, as I shall show, was only dormant, for it was reawakened by a trivial circumstance on one occasion, and by a severe mental stress again some years after.

The first recurrence followed a slight operation which was necessary to relieve an inflamed gland in the neck. She took the anæsthetic well, and recovered from it without any trouble, but on the following day the nurse told me that she had on several occasions lapsed into sleep of short duration, a few minutes or so,

to wake up quite unconscious of having lost herself. This attack was of exactly similar character to the former one, but unaccompanied by headache, and of a decidedly milder type. On more than one occasion she dropped off while the surgeon and I were in the room, waking up suddenly and continuing the conversation where she had ceased before her sleep. This attack lasted only a few days, but naturally caused both the family and myself considerable anxiety as to whether the condition would improve soon, or whether the patient was in for a long period of liability to the attacks as before. Before the wound healed—a week or so—she was quite well, and the symptoms of the condition passed off.

The second relapse followed, as I said, after a severe mental strain. The patient's mother, to whom she was exceedingly attached, died after a few days' illness away from home at a sea-side resort. The narcoleptic condition only presented itself once or twice. I only saw her once pass into the semi-conscious state not amounting to actual sleep. She was sitting in a chair, when I observed her close her eyes and appear to lose her balance for a few moments, recovering with the blinking of the eyes that I noticed in the first attack. Had I not known and seen the first attack, I should hardly have recognised what the nature of it was; perhaps I might have thought it a passing fainting attack, but, knowing her previous history, I have no doubt that she had a slight recurrence.

Since this time she has been quite well, and uses her brain considerably for work of all kinds, and as much as she has ever done.

I have no intention of entering any further into a discussion, or giving you an essay on this condition. A very large number of cases have been reported in medical literature differing slightly in details, but in the main the same as the case I have just read. They are interesting cases. The conditions that manifest themselves are so peculiar and strange, and the causation and pathology so obscure, that we cannot hope to be able to explain the phenomena without further observation.

I wish only to point out that the symptoms are not in any way allied to epilepsy, a fact which writers on this condition lay



special emphasis, nor is the relationship to normal sleep quite clear. Raymond, who has written on the subject, in alluding to the pathological varieties of sleep, "mentions a condition which would seem to represent the border-line between normal sleep and the unconsciousness often accompanying recognisable lesions of the cerebral structures," and perhaps this "border-line,"—a word I do not at all like—may be taken to be held by this condition known as narcolepsy. He recognises a mental hebetude and abnormal slumberous conditions associated with di-ordered mental activity.

Raymond's account might have been taken from my patient. He describes the condition as one in which the patient outside the usual hours of sleep passes into slumber. The sleep comes on suddenly in the midst of ordinary occupations, even, he says, as in my case, during meals. He states it is noticed in subjects liable to gout, rheumatism, or obesity, or suffering from auto-intoxications. Dr. Blodgett's patient had been subject to the attacks continuously for forty years, and often had several attacks in one day. She fell into a perfectly natural sleep, and could be easily roused by a call or an unusual noise, waking up unaware that she had been asleep, though at times the state was more profound, and she realised that she had passed an appreciable interval in unconsciousness. In spite of these numerous attacks lasting over such a long time, very little mental deterioration was noticed by her friends, and it must be observed that the patient was reaching an age when some failure might not unnaturally follow.

Other writers remark on the association of this condition with a toxic poisoning—toxic poisoning is almost as blessed a word as Mesopotamia—with obesity or diabetes, or deem the association of these diseases as accidental or following the same causative action; but I am inclined to accept Dr. Blodgett's remark, "No definite information upon this causation of symptoms in narcolepsy is yet available." This gentleman, in the account of his case, lays considerable stress on the neurotic history of his patient's family. In this his case agrees with mine, for in both there are the frequent manifestations of some neurosis taking one form or another.

## TUMOURS AND TUBERCLE IN MONKEYS.

BY

W. ROGER WILLIAMS, F.R.C.S.

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GREAT interest attaches to the maladies of monkeys, because it is among the highest members of this order that we find the nearest approach in organisation to mankind.

Notwithstanding the immense number of these creatures constantly under observation in the zoological collections of Europe, it is a curious fact that only about half a dozen examples of tumours have hitherto been reported; and their comparative immunity from this kind of malady seems to be a reality.

Thus, some time ago Bland-Sutton<sup>1</sup> examined the bodies of 110 of these animals who had died in the London zoo, but not a single example of any tumour did he find. Subsequently, H. J. Campbell<sup>2</sup> made 38 similar *post-mortem* inspections with the like negative result.

**Cancer.**—Leblanc,<sup>3</sup> however, long ago reported that he had met with instances of malignant tumours in monkeys, and I expect that they do occasionally occur, but I can cite only two modern instances.

The first of these is due to Goodhart,<sup>4</sup> who found "cancer" of the pituitary body in an Anubis baboon from the London zoo, where the animal had long been a familiar denizen. The tumour—a large, ragged-looking object—occupied the pituitary fossa, which it had eroded, and some of the adjacent structures were infiltrated. Histologically, it comprised "large epithelial-like cells arranged in some sort of an alveolar manner." There were no secondary deposits. This tumour, together with the brain and skull, are preserved in the museum of the Royal College of Surgeons.

<sup>1</sup> *Lancet*, 1883, ii. 276.      <sup>2</sup> *Guy's Hosp. Rep.*, 1891, xlvi. 19.

<sup>3</sup> *Clin. Vet.*, 1843, Aug., p. 343.

<sup>4</sup> *Tr. Path. Soc. Lond.*, 1883, xxxvi. 36.

The second instance was met with in a bonnet monkey, only eight months old, by Bland-Sutton,<sup>1</sup> the tumour being an intra-ocular glioma, consisting chiefly of small round cells.

In this connection reference may be made to the attempts of Metchnikoff, Shattock and Ballance and others, to transmit human cancer experimentally to monkeys, all of which experiments failed.

Thus monkeys, like human savages, seem to have very little proclivity to cancer.

Here it may be remarked that the alimentary propensities of these animals are predominantly frugivorous; but a good many of them are not averse to animal food when they can get it; some kinds are insectivorous, and others feed upon almost anything they can get. Like mankind, many species have a singular liking for birds and their eggs, as alimentary dainties.

**Non-malignant Tumours.**—With regard to non-malignant tumours, the available data are exceptionally meagre. Bland-Sutton has met with an instance of leiomyomatous thickening in the uterus of a baboon, which had some resemblance to myoma; and the same observer has also seen a fatty, tumour-like mass in the vicinity of each testis of a monkey, with hermaphroditic malformation.

According to Otto, exostosis is not uncommon at the tip of the tail of long-tailed monkeys; and in the museum of the Royal College of Surgeons of Ireland the hand of a monkey is preserved, showing a spongy exostosis of the first phalanx of the little finger.

Monkeys are also subject to hydatid cysts.

These few examples practically exhaust our present knowledge of non-malignant tumours in monkeys.

**Tubercle.**—It is an ancient belief, that monkeys kept in captivity are very prone to tubercle, and some years ago a mild sensation was experienced when Bland-Sutton<sup>2</sup> flatly contradicted this cherished conception. In justification of his contention, he appealed to the records of 110 *post-mortem* inspections of monkeys which had died in the London zoo, and comprised only three instances of tubercle.

<sup>1</sup> *J. Anat. & Physiol.*, 1885, xix. 449.

<sup>2</sup> *Loc. cit.*

He found, however, that these animals had experienced very heavy mortality from diseases of the lungs, the list comprising 22 examples of bronchitis, 11 of pneumonia, &c.

Some years later, H. J. Campbell<sup>1</sup>, as the result of similar work in the same field, arrived at exactly the opposite conclusion, having found that tuberculous disease was very frequent in these monkeys. Thus, no less than 20 of the 38 bodies he examined presented well-marked tuberculous lesions. In addition to these, there were also many cases of broncho-pneumonia.

It is evident that these discrepancies depend largely upon diversity as to the criterion of tubercle. Viewing the matter in this light, we shall probably be right in maintaining the validity of the old belief.

In support of this, reference may be made to the observations of Dr. A. J. Harrison, who has long been connected with the management of the fine collection of animals in the Clifton zoo. He says<sup>2</sup>:—"Monkeys are very liable to chest affections, and there can be no question that we have lost a great many from tuberculous disease of the lungs. They seem very prone to pleurisy, and adhesions are frequently found with and without tuberculous masses in the lungs, but actual cavities do not seem to be frequent. Monkeys seem to be particularly prone to tubercle."

It accords with the foregoing, that Lydia Rabinowitsch<sup>3</sup> has lately found many instances of tubercle among the monkeys that died in the Berlin zoo; and of 36 cases in which these lesions were specially examined *ad hoc*, in nearly three-fourths the type of tubercle was human; examples of bovine, avian and mixed types were only occasionally met with.

It has likewise been proved, that monkeys are very susceptible to the experimental inoculation of both the human and bovine forms of tubercle, as the experiences of Dieulafoy, Krishaber, Dungern and others testify.

Of like import is the common occurrence of specimens of simian tuberculous disease in museums, such as that of the Royal

<sup>1</sup> *Loc. cit.*

<sup>2</sup> *Bristol M.-Chir. J.*, 1894, xii. 285.

<sup>3</sup> *Deutsche med. Wchnschr.*, 1906, xxxii. 866.

College of Surgeons of Ireland, which have good collections illustrative of the pathology of these animals.

According to Woods Hutchinson,<sup>1</sup> monkeys in their native forests are but little prone to tubercle; but in captivity it is difficult to procure specimens free from the disease. Thus of 45 monkeys that died in captivity at the London zoo (1898 to 1899) 17 died of tubercle, or 38 per cent. Food habits have much to do with tubercle mortality; for of Hutchinson's animals 35 were vegetarian Catarrhines, and it was among these that all the 17 deaths occurred; whereas, not one of the 10 deaths among the Platyrrhine monkeys, who had taken a fair amount of animal food, was due to tubercle.

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## Progress of the Medical Sciences.

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### MEDICINE.

Pleural effusions present so many difficulties in diagnosis, that every additional symptom is welcome which really aids in revealing their presence. In children especially the physical signs are often hopeless, and we may be compelled to make exploratory punctures, which are themselves by no means reliable. Much discussion has taken place over the **paravertebral triangle of dulness on the opposite side** to an effusion which was first described by Grocco in 1902. Thayer and Fabyan<sup>2</sup> found this dulness crossing the median line and extending over to the healthy side in thirty cases out of thirty-two, one of the other cases being an interlobar empyæma, where it could hardly be expected to be present. Over the vertebræ themselves the dulness is marked to about the level of the flatness caused by the effusion on the affected side. The base of the triangle extends beyond them for two to seven centimetres, and a line joining the end of the base to the highest dull vertebral hypophysis forms the third side. In this area the respiratory sounds may be suppressed, and those sounds which are heard are tubular or nasal in character. It is usually larger in right-sided effusions, and is particularly valuable in encapsulated ones where the diagnosis is difficult. In pneumonia a similar well-marked area of dulness rarely occurs, and if present it does not alter or vanish when the patient lies on

<sup>1</sup> *Human and Comparative Pathology*, 1901.

<sup>2</sup> *Am. J. M. Sc.*, 1907, cxxxiii. 14.

the affected side. In effusion, on the contrary, this dulness at once changes with the posture. The writers think that the fluid lies against and in front of the vertebræ and dulls the vibrations which would be conveyed through them. Pieraccini noted a similar but hyper-resonant area on the healthy side in a case of pneumo-thorax. I have endeavoured to subject this last observation to a test, but though the resonance over the vertebræ was marked, it was difficult to satisfy oneself that there was real hyper-resonance there, or over the healthy side in the area under discussion.

**Hypertension.**—Some time ago reference was made in these columns to the terrible mortality due to the common forms of apoplexy, that is chiefly to cerebral hemorrhage and thrombosis. Since that time considerable progress has been made both in the way of prevention and treatment. The estimation of blood pressure by exact instruments has become more common, and much research has been devoted to the means of preventing or reducing excessive tension. Since many cases of this over-tension have been found unconnected with nephritis or any known disease, efforts have been made to map out the course and tendencies of this "idiopathic" form, with the result that a fairly well-marked group of symptoms has been recognised, though the underlying cause is still uncertain. A theory has been put forward by Loeb<sup>1</sup> that hypertension is an effort towards self-preservation, though at a serious cost. The blood supply of certain parts of the organism is an absolute necessity, and to maintain this the pressure is automatically raised, even though other structures are imperilled. Cushing, indeed, propounded this explanation of the extraordinary blood tension found in compression of the brain, viewing it as an effort to maintain the blood supply of the medulla. In kidney disease and other instances the rise of pressure has been usually regarded as the result of the irritation of various toxins on vaso-motor nerves, or on the muscular wall of the arterioles. Increased suprarenal secretion, lessened thyroid activity, or excessive viscosity of the blood, have also been invoked as causes. Now Loeb finds that in kidney disease hypertension appears chiefly in those forms where the glomeruli are most affected, and he regards it as a means of maintaining their blood supply, and hence the functional activity of the kidneys, by a reflex which raises the general blood supply through the cerebro-spinal centres. Similar reflexes are invoked in other cases of hypertension. Certainly the supply of blood to each vital organ is all essential. In orthopnoea, as Leonard Williams says, the patient sits up to facilitate the efflux of venous blood from the medulla. Still, there seems little direct proof of these reflexes, and there is much to be said on the other side from the fact that certain substances in the blood stream can without

<sup>1</sup> *Deutsches Arch. f. klin. Med.*, 1905, lxxxv. 348.

doubt act directly on the muscular coat. Arterio-sclerosis is more often a result than a cause of high tension, as most observers now agree, and sometimes neither this nor any other condition can be detected as a cause. Though the patient be abstemious and placid, with healthy kidneys and vessels, the blood pressure may reach 200 mm. He may suffer from dyspnoea on slight efforts, attacks of vertigo, somnolence and palpitation.<sup>1</sup> The pulse rate shows no difference when he is standing and lying down, the aortic second sound is accentuated and the apex displaced outwards. Sooner or later the heart, labouring under its load, breaks down with a leaking valve, perhaps the aorta dilates, or a cerebral hemorrhage takes place, and the patient is killed or crippled for life. Clearly it is important to prevent this conclusion, either by discovering the cause of the evil, or, if this is impossible, by warding off the secondary results. Benefit is often obtained by reducing the quantity of the food, and especially the nitrogenous elements of it, and by prohibiting tea, coffee and tobacco. Oliver, at the meeting of the Therapeutical Society, advocated in some cases a lacto-vegetarian diet with the exclusion of salt. The drinking water should contain a minimum of calcium salts. Among other vaso-depressants certain benzene derivatives appeared to be useful. Senator<sup>2</sup> appears to rely upon similar dietetic treatment, and thinks that iodine preparations are chiefly valuable from their lessening the viscosity of the blood. He prefers to give them in combination with nitrites. Thus he administers potassium iodide with sodium nitrite for considerable periods. Others employ nitrites only on special emergencies, and trust chiefly to careful diet with the frequent administration of salines and blue pill.

Huchard<sup>3</sup> claims that aneurysms are best treated by thus lowering the blood pressure, and reports some instances of success. He employs a strict diet with a minimum of meat and extractives, tea, coffee, stimulants, and tobacco, and enforces rest. Too much value has, he thinks, been given to the iodides, and he would rely more upon the use of nitrites. From time to time he gives a course of milk diet with theobromine to eliminate vaso-constrictor toxins.

One of the most important points in connection with hypertension is the treatment which should be adopted when the heart gives way under the strain of high blood pressure. Leonard Williams, for instance,<sup>4</sup> insists that to give heart tonics in mitral regurgitation due to obstruction in the peripheral vessels is merely to whip a tired horse, but that if we lower the tension the heart will recover its tone. Evacuants, theobromine and rest in bed, and vaso-dilators would then be our chief remedies. On the other hand, some writers, such as T. C. Janeway,<sup>5</sup> do not hesitate to

<sup>1</sup> Leonard Williams, *Clin. J.*, 1907, xxx. 29.    <sup>2</sup> *Folia Therap.*, 1907, i. 40.

<sup>3</sup> *J. d. Praticiens*, 1906, xx. 307.    <sup>4</sup> *Loc. cit.*, p. 39.

<sup>5</sup> *Am. J. M. Sc.*, 1907, cxxxiii. 54.

employ digitalis in the failing heart due to hypertension, though in a sudden failure of the left ventricle Janeway advises the simultaneous use of vaso-dilators and cardiac stimulants.

**The diagnosis of typhoid.**—Among other aids to diagnosis the following have been recently under discussion. The continuous loss of the abdominal reflex in the infra-umbilical region has been shown by J. D. Rolleston<sup>1</sup> to have considerable value if daily examination is made for it. Out of forty-five cases which he tested, he found it absent or diminished in forty-two, the three others not being examined till late in the disease. The reflex is practically always present in young people both in health and during all other diseases, except in certain affections of the nervous system and abdominal states, such as appendicitis and peritonitis. Thus Müller and Seidelmann found it in 2,999 persons out of 3,000 who were not suffering from those two groups of diseases. After the age of 50 it tends to disappear even in perfect health, and therefore it is of no use as a test for typhoid after that age. In young people, however, the reaction obtained by stroking the abdomen by a pencil disappears, or is much diminished during typhoid for a variable period averaging a week. It is not clear how early it is lost. At a very early stage it may be quite brisk, and then fades away, to reappear towards the stage of lysis. If it fails to return when the temperature is falling, a relapse may be expected, and it is therefore of some prognostic value. A persistently high temperature after the return of the reaction is due to some other cause than the typhoid itself.

A yellow pigmentation of the palms of the hands and the soles of the feet is in my own experience very frequent in typhoid, and of some diagnostic value. Though it may depend to some extent on the occupation and personal habits of the patient, we rarely see in other diseases the vivid colouring which is present in typhoid. Regis<sup>2</sup> attributes its recognition to Philipowicz, who found that it was peculiar to typhoid, and ascribed it to an atrophic condition of the skin due to the failure of the capillary circulation. The cause is however uncertain, but Grocco thinks it is almost always present in typhoid, especially in children and women, though less certain in men. It usually appears in the first week, disappears with convalescence, but returns during a relapse, and seems to bear no relation to the severity of the case. Bernard describes another symptom to which he attaches some value in childhood. If we palpate the ileo-cocol region with care, two or three swellings will be felt varying in size from a filbert to an almond. They are parallel to the long axis of the colon, and are perceptible about the end of the first week. It has been said that these swellings are hypertrophied Peyer's patches, and they certainly seem to correspond to the situation in which the patches are found.

<sup>1</sup> *Brain*, 1906, xxix. 99.

<sup>2</sup> *M. Press and Circ.*, 1906, cxxxiii. 6.



The presence of typhoid bacilli seems almost universal in the secretions and fluids of the body. Thus they are found not only in the stools, the urine and the roseolous spots, but also in the blood, the sputa, and sometimes in the bile. Von Jaksch found them in over 94 per cent. of the splenic punctures he made, and claims that this method is free from danger and is the best means of an early diagnosis. Preble<sup>1</sup> notices that more reliable results are now given by blood cultures, as the technique is improved. He quotes Duffy as getting positive results in all his cases where the temperature was over 102°, but less frequently when it was lower. The difference was apparently due to the stage in the disease, and the suggestion is made that the bacilli are always present in the second and third week. Coleman and Buxton find that in 604 reported cases bacilli were met with in 453, or 75 per cent. Hirsh too concludes that bacilli are always to be found at some stage, but that they disappear about the end of third week; while Pöppelmann claims to have obtained excellent results by simply making blood smears in the ordinary manner, and staining them by the May-Grünwald method. If this is confirmed in practice, a most valuable aid to diagnosis will be gained.

GEORGE PARKER.

## SURGERY.

Several papers have been published during the last few years\* on **delayed anæsthetic poisoning**, and such a condition is now well recognised, and comes, of course, under the observation of the surgeon in charge of the case, and not the anæsthetist. As the symptoms are not pathognomonic, it may be extremely difficult to say in some cases whether they have been caused by the anæsthetic or not, and it is highly probable that in several cases in which they have been attributed to it they have been due to other causes. In many of the cases of late anæsthetic poisoning, acetone or diacetic acid, or both, have been found in the urine, and there is often a smell of acetone in the breath; but acetone has been frequently found in the urine after the administration of an anæsthetic without symptoms,<sup>3</sup> and it is stated by Guthrie to be present in "starvation, malignant cachexia, peritonitis, gastric ulcer and other abdominal disorders, sepsis, pneumonia, after poisoning by phloridzin and morphine," as well as in diabetes, and he says "it may be artificially induced by the injection of fat." Indeed, it seems to me probable that if carefully looked for it would be found in the urine of healthy persons fairly often.

<sup>1</sup> *Prog. Med.*, 1907, i. 175.

<sup>2</sup> Guthrie, *Lancet*, 1894, i. 193; 1903, ii. 10; 1905, ii. 583.

<sup>3</sup> Hubbard, *Boston M. and S. J.*, 1905, clii. 744; abstract in *Lancet*, 1905, ii. 234.

Kelly<sup>1</sup> found acetone and diacetic acid in the urine of patients on admission to hospital suffering from various diseases who had not had an anæsthetic, and without any symptoms like those of late chloroform poisoning. Moreover, symptoms such as occur in these cases of late chloroform poisoning may occur without any anæsthetic or operation, and may be fatal,<sup>2</sup> and the condition present in paroxysmal vomiting of children is a closely allied one. Again, sepsis may cause similar symptoms, and it would be almost impossible to say in a septic case that they were due to delayed anæsthetic poisoning rather than to the absorption of a septic toxine, though not necessarily one producing pyrexia. It is only in cases in which the patient is in good general health at the time of the operation, and this an aseptic one and unattended by shock or absorption of carbolic acid from the skin, that we can regard the anæsthetic as the cause of the symptoms. Chloroform has been mainly responsible for such symptoms, but there are a few cases in which they have followed the administration of ether.<sup>3</sup> In carboluria the peculiar conditions of the urine would, of course, indicate the nature of the case, but the symptoms closely resemble those of late anæsthetic poisoning. Some seem to think those of fat embolism do also, but they certainly do not in a typical case of fat embolism.

The symptoms of late anæsthetic poisoning are described by Guthrie<sup>4</sup> as profuse and repeated vomiting, the vomit eventually resembling the dregs of beef-tea, restlessness, excitement, delirium, alternating into periods of apathy, occasionally jaundice, and unconsciousness deepening into coma. The symptoms come on about twelve hours after the anæsthesia, and in the interval the patient may seem to be progressing favourably. Death may occur in twelve hours, but not usually until the fifth day. There is not usually any rise of temperature, but it may be very high. Albumin may be present, and casts may be found in the urine also. I have already referred to the smell of acetone in the breath.

In many of the fatal cases extreme fatty change has been found in the liver, and also a similar change in the heart, in the muscles, and in the kidneys, and no other condition has been discovered associated with this.

It is thought by most of those who have studied this subject that the fatty change is produced by the chloroform, and in some way, and at any rate to some extent, is the cause of death; but Guthrie holds that it precedes the anæsthesia, and is only augmented by it, but that this augmentation is in some way the cause of the symptoms. If such fatty change, found after the administration of chloroform, were caused by it alone, both the fatty

<sup>1</sup> Kelly, *Ann. Surg.*, 1905, xli. 161.

<sup>2</sup> Brackett, Stone and Low, *Boston M. and S. J.*, 1904, cli.; abstract in *Lancet*, 1904, ii. 846.

<sup>3</sup> Favill, *J. Am. M. Ass.*, 1905, xlv. 691. <sup>4</sup> Guthrie, *Lancet*, 1905, ii. 583.

change and the resulting symptoms ought to occur in proportion to the duration of the administration ; but they do not. Indeed, if such fatty change were the sole cause and were due to the anæsthetic, cases of late anæsthetic poisoning should only occur after very prolonged anæsthesia (cases, in fact, in which an excessive dose has been given), as it is such a very rare condition. If, therefore, the fatty change is due to the chloroform, and in any degree causes the symptoms, there must be also some other factor at work, and we are quite ignorant as to what this is, for there seems to be no evidence to support Guthrie's view that fatty degeneration of the liver precedes the administration of the chloroform, though if it did the effect of the chloroform would be readily explained, for it would act "as the last straw," as it has been expressed. There is no doubt an extremely fatty liver may be present in children who have had no anæsthetic. Dr. John Thomson, of Edinburgh, has seen very extreme examples in children dying of broncho-pneumonia.<sup>1</sup>

We know from experiments on animals<sup>2</sup> that subcutaneous injection and inhalation of chloroform will produce fatty degeneration of the liver and other organs. In some of the experiments a control examination of the liver was made under ether at an earlier period. Ether injected subcutaneously did not produce this fatty change in the liver, yet some of the fatal late anæsthetic poisoning cases have been after ether, and fatty changes were found in the liver, kidneys and muscles.<sup>3</sup> Guthrie regards such cases as proof of pre-existing fatty change in the liver<sup>4</sup>. But then, if ether does not markedly increase this, how could such fatty change, accelerated by the ether, have been the cause of death? It must need a very light straw indeed, as the last one, if the ether is to be blamed at all.

In chronic tuberculosis fatty changes in the liver are quite common, yet late anæsthetic poisoning is not specially common in such cases.

It cannot then be regarded as proved that the fatty change found in the liver, heart and kidneys is by itself really the cause of death in these cases. Even granting that it is in some way connected with the death, in what way it is so is still quite uncertain. Neither is the relation of the symptoms to the presence of acetone and diacetic acid clear. In fact, at the present time the whole subject is very obscure.

The treatment adopted by some in diabetic coma has been recommended for this condition—saline transfusion, and the administration of bicarbonate of soda. It would seem that if it

<sup>1</sup> Stiles and McDonald, *Scottish M. and S. J.*, 1904, xv. 97.

<sup>2</sup> Stiles and McDonald, *loc. cit.*; Ungar and Junkers, *Über fettige Entartung in Folge von Chloroform-inhalationen*, Bonn, 1883; Ostertag, *Arch. f. path. Anat.*, 1889, cxviii. 250; Schenk, *Ztschr. f. Heilk.*, 1898, xix. 393.

<sup>3</sup> Carmichael and Beattie, *Lancet*, 1905, ii. 437.      <sup>4</sup> *Lancet*, 1905, ii. 583.

is an acid poisoning it is neither acetone nor diacetic acid, but a precursor of these —  $\beta$  oxybutyric acid, which is the poisonous agent.

\* \* \* \*

The publication by Mr. Barker of a paper on "**Spinal Anæsthesia**"<sup>1</sup> has brought the subject prominently before the minds of surgeons in this country, and it may be well to consider the value of this method of producing anæsthesia, as contrasted with the ordinary one. Mr. Barker does not suggest its general adoption in place of the usual method. He has tried it in 128 cases with a view to determine its value, and seems well pleased with it. It has been used in several thousand cases on the Continent by various surgeons.

There are three questions to be answered before we can form an opinion as to its value :—

1. Has it advantages over general anæsthesia as at present employed? In answering this we must consider its relative risk to life, and the probability of unpleasant sequelæ.

2. What are the limitations as to its use?

3. Is it certain in its action?

There is now nothing unpleasant to the patient in general anæsthesia. When ether was given alone there undoubtedly was; but ether preceded by nitrous oxide or ethyl chloride is not unpleasant to take, nor is chloroform. The after taste of ether is, however, often much complained of by patients. But, as Mr. Barker says, some patients have a great dread of a general anæsthetic. In what does this dread really consist? If it is fear of death from the anæsthetic, then we can hardly represent to them that spinal anæsthesia is safer on the evidence at present before us. We should rather point out to them how seldom anyone dies from a general anæsthetic. If it is some unreasonable fear of losing consciousness, or dread of suffocation, then spinal anæsthesia seems most suitable in such cases. But many patients would, I think, prefer to lose consciousness, and to know nothing of what was going on. Mr. Barker tells us that those patients of his who had had both chloroform, and spinal anæsthesia, preferred the latter.

After a general anæsthetic vomiting is, of course, sometimes trying, though often absent, and headache may occur as well. With stovaine both headache and vomiting may occur, and the vomiting even occur during the operation (though this is very rare). In Mr. Barker's second series of fifty cases, some nausea or vomiting and headache were present in twenty, but only quite exceptionally was vomiting marked. These symptoms were usually removed by phenacetin and caffeine, or a purgative. The after effects of stovaine in one hundred of Chaput's cases<sup>2</sup> were vomiting in ten

<sup>1</sup> *Brit. M. J.*, 1907, i. 665.

<sup>2</sup> "L'Anesthésie rachidienne à la Stovaine," *Arch. de Thérap.*, Nov. 15th, 1904; Chiene, *Scottish M. and S. J.*, 1906, xviii. 220.

(not always on the first day), nausea in thirteen, headache forty times (not always on day of operation), always relieved by application of ice. Neuralgia is said to have occurred in more than eighty cases, but it is not stated where. This also in thirty-five cases was later in its onset than the day of operation. When cocaine was used, these symptoms and pain in the back were often severe, and the after effects seemed worse than with general anæsthesia. With stovaine it is difficult to decide. They do not, at any rate, seem worse than the after effects of general anæsthesia.

The risk to life of spinal anæsthesia does not seem great, but there have been serious symptoms from its use, and I do not know that we are yet in a position to compare its risks with general anæsthesia. Tuffier up to 1904<sup>1</sup> had no bad results in 2,000 cases. At the German Surgical Congress, 1905,<sup>2</sup> Hermes, of Berlin, in reporting ninety cases of Sonnenberg's, said that a cold sweat with pallor and small pulse occurred in several abdominal operations under stovaine, and Preindlsberger, of Sarajewo, in 305 cases had six similar ones. Chaput<sup>3</sup> describes a case in which, after injection of stovaine from a "defective old stock," the pulse stopped, but returned with the administration of stimulants, and the use of artificial respiration. The case is quoted by Chiene<sup>4</sup>. Silbermark had used stovaine in 300 cases, and thought that with this drug, eucaïne and tropacocaine, there was no danger; nor had Neugebauer observed any alarming symptoms in 480 cases. Bier stated that the use of an adrenal preparation with the stovaine limited its dangers considerably, and should always be used. Septic infection of the spinal canal seems never to have occurred in the experiences of these surgeons, and should not, of course, occur, but might if the method were employed by those unaccustomed to thorough methods of sterilisation. There is, at any rate, one case on record of persistent paraplegia following spinal cocainisation. At the Surgical Society of Paris a patient was shown who three days after the operation began to develop spinal symptoms, and they continued eight months later, when the case was reported.<sup>5</sup>

Almost all surgeons who have endeavoured to produce spinal anæsthesia have had failures, and some many failures, but it seems generally considered that this is due to faulty technique.

Mr. Barker says it may be better not to use this method for the very old, at all events for the present. But it is difficult to know at what age persons are to be regarded as very old. Bier<sup>6</sup> recommends it for the weak and aged; Hermes<sup>7</sup> for patients over 75.

Spinal anæsthesia has one distinct advantage, and that is that

<sup>1</sup> "Anesthésie rachidienne à la Stovaine," *Wien. klin. therap. Wchnschr.*, 1905, No. 15.

<sup>2</sup> *Ann. Surg.*, 1905, xlii. 942.

<sup>3</sup> *Société de Biologie*, May, 1904.

<sup>4</sup> *Scottish M. and S. J.*, 1906, xviii. 220.

<sup>5</sup> *Lancet*, 1905, i. 677.

<sup>6</sup> *Loc. cit.*

<sup>7</sup> *Loc. cit.*

in an operation on the lower limb, such as a hip joint amputation, likely to be attended by shock, it tends to prevent it, just as Crile showed that the injection of cocaine into the large nerve trunks of the limbs would. In a patient much exhausted by hectic fever, I amputated just below the trochanters under stovaine spinal analgesia, and there was no shock at all; indeed, an hour after the operation his pulse was only  $100^{\circ}$ , whereas in the ward before he went up to theatre it had been  $120^{\circ}$  for more than twenty-four hours. The anæsthesia was perfect, and there was not the slightest nausea or headache after it. In cases in which the lungs or kidneys are not in a fit condition for general anæsthesia, spinal anæsthesia has also a distinct advantage.

Spinal anæsthesia above the umbilicus seems uncertain, but some surgeons have done operations on the upper abdomen with it, though others regard the anæsthetisation of this area as too uncertain. This is certainly a considerable disadvantage in abdominal surgery, for owing to uncertainty in diagnosis we may find we have to extend an incision begun for disease supposed to be in the lower abdomen into the upper, or the disease, though largely in the lower abdomen, may extend into the upper. For instance, what is diagnosed as acute appendicitis may turn out to be a perforating duodenal ulcer. Another disadvantage of spinal anæsthesia for some abdominal operations would be the inability to employ the Trendelenburg position, at any rate early in the operation. Speaking of their experience of spinal anæsthesia at the German Surgical Congress in 1905, both Bier and Silbermark did not recommend it at all for abdominal operations; but other surgeons have had a satisfactory experience of it in the lower abdomen.

There does not seem, then, any reason why spinal anæsthesia should replace general anæsthesia, except in cases in which the patient would prefer it, or in which there is so much collapse that we dread to give a general anæsthesia, and local anæsthesia would not be satisfactory, and in cases in which we specially fear severe shock, even though the patient is not collapsed; also when the heart, lungs, or kidneys are not in a condition for general anæsthesia. We must remember that if there is great abdominal distension it would not be easy to get the spine well curved forwards to make the lumbar puncture, and we must also realise fully that our time for performing the operation under spinal anæsthesia averages about an hour, though it may be increased by the addition of adrenalin to the fluid injected.

The technique of this method is fully described in Mr. Barker's paper.

C. A. MORTON.

## OBSTETRICS.

The prevention and treatment of **post-partum hemorrhage** is a subject of never-failing interest to the practitioner, and in view of the sudden and frequently fatal catastrophe which may ensue as the result of its occurrence, every attempt to suggest new or improved methods for either its prevention or cure demands careful examination.

Stanmore Bishop,<sup>1</sup> as the result of an article on this subject, has been the cause of a considerable correspondence. In his original article he produces many arguments for the employment of a method certainly not new, and sufficiently well known, although not widely taught or practised as a primary method of dealing with this complication, namely compression of the abdominal aorta.

He gives a résumé of the different causes of post-partum hemorrhage as generally taught, under the following headings, namely primary external atonic, primary concealed atonic, secondary external traumatic and secondary concealed traumatic, and states that while the attendant is endeavouring to satisfy himself under which of these heads the particular case falls, the patient is being rapidly exhausted by bleeding.

He also states that in addition to the delay while the exact cause is being mentally decided on, a prolonged search for tears of the viscera, uterus or vagina is necessary, which has to be carried out in the midst of a torrent of blood, the clots from which obscure everything, and only after this exploration can anyone feel certain that the cause is not traumatic; and all through this tedious and difficult exploration the patient's vitality is rapidly becoming less.

Next, he states the student is taught that there are fourteen distinct causes of atonic post-partum hemorrhage, the first of these being improper management of the third stage, and describes the student as often exciting irregular and ineffectual uterus contractions by squeezing the uterus during its intervals of partial relaxation, and then removing the placenta by the hand introduced into the vagina or uterus.

After giving a list of the fourteen causes of atonic post-partum hemorrhage, he proceeds to eliminate a large number, such as hæmophilia, which is, as he states, rare, inversion of the uterus, which does not occur if the third stage is properly managed, and adherent or retained placenta, as regards which he considers that any attempt at removal whilst bleeding is going on is to court disaster, since it is certain to be attempted with unsterilised hands, while the presence of the placenta in the uterus makes no difference to the really effective measures which will arrest the bleeding.

<sup>1</sup> *Practitioner*, 1906, lxxvii. 145.

He groups all the remaining causes under the heading of "tired uterus," and points out that it is useless to attempt to stimulate contraction in a uterus that is relaxed, because it is "tired," and so has lost temporarily the power of contraction.

He makes much of the difficulty of explaining what is meant by uterine "retraction." The difficulties of explanation are not great, and, after all, quibbling over the precise explanation of a term is not of any great assistance to the seeker after truth.

He denies unhesitatingly that uterine contraction—to the securing which all the energies of the attendant should be directed—is the thing which should be aimed at, and states that the truth is exactly the opposite. "We must not look to uterine contraction to stop the hemorrhage, but to cessation of the hemorrhage in order to permit once more of contraction of the uterus."

He then states that there are six various measures given by writers on midwifery by means of which uterine contraction may be brought about, and asks, "Do the advisers of these various measures believe in any one of them? No. We are to 'try' them all, one after the other, and no one for any length of time." They are expected to fail, as to each one is appended the phrase, "If this fail." All having been tried, thrombosis, produced by the action of perchloride of iron or other styptic, is the last resource. Finally, having proved the uselessness of all the measures advised, he draws the attention of readers to the fact that hemorrhage from veins can be stopped by elevating the bleeding part, and from arteries by compressing their parent trunks, and that consequently elevation of the pelvis will stop such uterine hemorrhage as comes from uterine veins, and pressure on the aorta such as comes from uterine arteries.

He, in consequence, advocates the raising of the foot of the bed by pushing a table beneath it, or placing the feet of the bed on two chairs, in order to cope with the venous, and compressing the aorta in order to stop the arterial hemorrhage.

Having in this way checked the immediate outflow of blood, the uterus, directly it shows signs of returning vitality, is assisted to expel contained clots, and the compression of the aorta handed over to the nurse, while the surgeon proceeds to sterilise his hands for the purpose of removing adherent placenta, or searching for lacerations.

He argues that the circulation through the ovarian arteries not being cut off is sufficient to preserve the contractility of the uterus, and keep it sufficiently supplied with blood to ensure its muscular fibre retaining its vitality. He gives, in support of his contention, the instance of a thigh cut off by a circular saw, and asks, "Would the surgeon in such a case, supposing his usual appliances absent, squirt hot water at the stump or apply perchloride of iron"?



He insists that a combination of the two methods he suggests, namely elevation of the pelvis and compression of the aorta, are the only true ways of combating post-partum hemorrhage, and that these two methods in combination must be persisted in, the latter for three hours if necessary, and the former for twelve.

Gordon Fitzgerald<sup>1</sup> protests against the condemnation of well-tried methods on the experience of one man, and against that of many others who have proved the efficiency of the methods they advocate *when properly applied*. He dissents from Mr. Stanmore Bishop's description of a typical case of such hemorrhage as occurring in a healthy young primipara, who has had satisfactory first and second stages of her labour, and dies of *acute primary atonic post-partum hemorrhage, primary inertia*.

He states that the forces which naturally control post-partum hemorrhage are contraction, retraction, and clotting.

He points out that neither active contraction nor clotting will permanently check post-partum hemorrhage in the absence of retraction, which he describes as that plastic force which moulds the uterus to its contents. He admits that retraction is aided by contraction, but he has as yet seen no convincing proof that it is dependent on contraction, and cannot come into action in its absence.

He allows that compression of the aorta will cause the cessation of post-partum hemorrhage, but considers that it is difficult to carry out effectively, except in hospital practice, where there are numerous assistants. He doubts the influence of elevation of the pelvis on hemorrhage coming from the veins, especially if the aorta is compressed. He relies mainly on prophylaxis, advising that hæmophilia, if it be present—and it is well known, that it is a very rare condition in the female—be combated in advance by the administration of arsenic, strychnine and chloride of calcium.

Protraction of the first and second stages is to be avoided, and the third stage as prolonged as is consistent with the safety of the patient. All preparations for the treatment of post-partum hemorrhage should be made in advance.

Prolongation of the second stage should be avoided by the early use of forceps, but prolongation of the first stage is comparatively unimportant.

The indications for termination of the second stage will be found in the conditions of the patient's pulse and temperature. In cases of hydramnios and over-distension from twins, especially in multiparæ, the emptying of the uterus should be gradual, and plenty of time allowed in the second stage; by early puncture of the membranes high up in the first condition, and allowing of considerable delay between the birth of the two children in the second, so that the over-distended uterus, whose contractions are

<sup>1</sup> *Practitioner*, 1906, lxxvii, 652.

sure to be weak at first, may gather strength for its final efforts. In the case of multiparæ, a previous history of adherent placenta will prepare us for dealing with that condition.

He advises after thirty minutes waiting, if the slight hemorrhage which occurs with each contraction due to the expulsion of already effused blood does not diminish, the extraction of the placenta with the gloved hand.

The improper management of the third stage is the great predisposing cause.

The immediate grasping of the uterus and expulsion of the placenta directly after the birth of the child is one of the most fertile causes. Unless there is undue hemorrhage, no efforts at expulsion should be practised unless the placenta is found to be in the vagina. That it is in the vagina can be recognised by drawing out all the loops of cord in the vagina, and then grasping the uterus and lifting it towards the ensiform cartilage, when, if the placenta is still in the uterus, the cord will be drawn back into the vagina.

Forcible and rapid attempts at expulsion result in irregular contractions, possibly imprisonment of the placenta in the uterus by hour-glass contraction, or detachment of portions of its maternal surface.

E. Hastings Tweedy<sup>1</sup> considers that Stanmore Bishop's statement that "post-partum hemorrhage is essentially a general practitioner's tragedy, and that from his own experience and that of others, cases do not occur in hospital," is unwarranted. He finds that the statistics of the Rotunda show that in 5,695 women there occurred fifty-six cases of post-partum hemorrhage, of which thirty-one were due to retained placenta, membranes, or clots mechanically preventing the closing down of the uterus, three were traumatic, and four of the secondary variety. Of the fifty-six cases, three died from supervening shock.

Compression of the abdominal aorta as a means of controlling hemorrhage has been taught and practised at the Rotunda for years, and is looked upon as a valuable temporary expedient.<sup>2</sup>

That retraction is independent of contraction is shown by the following arguments. The uterus does not commonly contract for about seven minutes after the birth of the child. If the prevention of hemorrhage depended on contraction alone, free flooding should occur in all cases, and recur after contraction has passed off.

In the case of a woman delivered with forceps, in the absence of contraction she must inevitably bleed to death. This we know does not happen.

During Cæsarian section the gradual thickening of the uterine wall can be *seen* to be taking place, and that in the absence of contraction.

<sup>1</sup> *Practitioner*, 1907, lxxviii. 361.

<sup>2</sup> *Vide* p. 121.

Slight mechanical causes, such as a piece of retained placenta or a full bladder, appear to be able to prevent retraction, and so promote the occurrence of hemorrhage.

G. E. Herman,<sup>1</sup> in continuing previous articles on this subject, points out that Stanmore Bishop, in his arguments against the use of perchloride of iron or other astringents in the treatment of post-partum hemorrhage, is attempting to controvert a proposition put forward by no modern teacher, and states that this method is now extinct. It is a bad method because (1) it is unreliable, and (2) leaves the uterus full of clot, and thus predisposes to sapræmia. He says that no student is taught to ascertain under which of four heads the cause of the hemorrhage falls, and that any student under examination stating that he would search for lacerations with, presumably, speculum, light, and swabs, as his first treatment of post-partum hemorrhage, would be looked upon as a danger to the public, and referred.

Herman refers<sup>2</sup> to the danger of undue haste in securing the termination of the third stage, and says that this arises not from producing "spasmodic and inefficient contraction," as claimed by Bishop, but from the possibility of the membranes not being detached naturally when the expulsion of the placenta takes place, and consequently a piece of chorion being left behind.

Herman does not believe in the numerous causes of post-partum hemorrhage described by Bishop, and states that many of them may be neglected as not being in any way concerned, and knows of no evidence that either drugs or diet during pregnancy have any effect on the amount of bleeding during the third stage of labour.

Herman differs absolutely from Bishop in holding that the current teaching that it is uterine contraction which stops post-partum hemorrhage is correct.

Pressure is only a temporary means of suspending bleeding until the uterus has regained its contractile power.

As regards retraction, Herman reaffirms the definitions of *retraction* and *contraction* practically in the terms generally familiar and almost identical with those used by Fitzgérald, and he states that one great cause of post-partum hemorrhage is the emptying of the uterus in the absence of a pain.

He defines a "tired" uterus as one that is not contracting vigorously, and consequently not doing any harm either to the maternal or foetal soft parts, and considers that the remedy for this is rest secured by a dose of opium. If, as in the practice of the most experienced accoucheurs, post-partum hemorrhage is caused by the retention of a succenturiate placenta, or piece of membrane in the uterus, the best treatment is to remove it.

He doubts the statement that serious post-partum hemorrhage is caused by cervical lacerations.

<sup>1</sup> *Practitioner*, 1907, lxxviii. 445.

<sup>2</sup> *Loc. cit.*

He agrees with Bishop that when with post-partum hemorrhage contraction is absent, pressure is the best thing in the shape of bimanual compression applied to the body of the uterus.

He points out that compression of the aorta in post-partum hemorrhage was advocated by Baudelocque in 1835, and previously by Ramsbotham. Robert Barnes and many other English authors have also recommended it.

In referring to Bishop's suggestion as to the mental state of a surgeon who would squirt hot water at a divided limb to check bleeding, he points out that hot water has a specific contractile effect on the uterus, so that the cases are in no sense parallel.

The objection to an immediate attempt to replace an inverted uterus or remove a piece of placenta, that it is likely to be done with unsterilised hands, is answered by pointing out that if the attendant has done his duty during the second stage, his hands should be sterile, and ready during the third stage for any such emergency.

He objects to the statement that a number of "experiments are to be made"; the measures described are not experiments, but manipulations, each with a definite and necessary object, the final aim being to secure an empty, clean and contracting uterus, with retraction in the intervals between contractions. If contraction cannot be got, pressure must be resorted to. This is best applied to the uterus, but there is no reason why the doctor should not compress the uterus and the nurse the aorta. Lastly, the great prophylactic is, "Do not deliver when the uterus is tired."

This series of articles, in the writer's opinion, confuses the issues. The writers all seem to have some different condition in mind.

Stanmore Bishop, in his advocacy of what is undoubtedly a useful method as an adjunct in severe cases, spoils his case by unnecessary declamation and abuse of an opposition which does not exist.

To suppose that it is necessary to make a prolonged search for lacerations in a case of post-partum hemorrhage is ridiculous. In the first place, as Herman states, hemorrhage from a lacerated cervix is only quite exceptionally severe, and occurs with a hard, contracted uterus, which must be obvious to anyone attending a confinement who observes the condition of the uterus by keeping his hand on it for a reasonable time, not less than half an hour, after the completion of the third stage.

In the second place, if the uterus is watched by the hand on it after the third stage is completed for this period, how often does severe post-partum hemorrhage occur? In the writer's experience, out of close on 8,000 cases, he has met with himself, or been summoned to, only twelve cases, in all of which but two the hemorrhage was stopped by grasping the fundus through the abdominal wall; in these two sudden severe hemorrhage occurred

which was stopped by introducing the hand into the uterus and compressing the placental site against the closed fist.

Hemorrhage does not occur even in an inactive uterus so long as the placenta is not detached, and anyone who has done a Cæsarian section knows how firm this attachment is.

Again, in a Cæsarian section, when delivery has been effected in the absence of labour pains, the uterus retracts almost at once after the delivery of the child, and no hemorrhage occurs except from the cut surface, and this ceases directly contraction takes place.

The first method, and the most generally successful one in ordinary cases, is compression of the uterus. Compression of the aorta is a useful adjunct. Elevation of the pelvis, though a most useful proceeding in the treatment of the shock which sometimes succeeds even a slight hemorrhage, is rather a waste of valuable time if compression is omitted. Hot water injection is a valuable stimulant to uterine contraction, but cannot stop hemorrhage in any other way than this, and in addition helps to clear the uterus of clot, etc.

The resort to forceps as soon as signs of exhaustion come on (not because pains are absent), and the management of the third stage without hurry, allowing plenty of time (up to an hour and a half if necessary) for the placenta to be separated naturally while the hand on the fundus guards against and serves as a warning of relaxation, are the measures which are the best means of preventing it.

Ergotin and strychnine, the former in small doses, administered during the last fortnight of pregnancy have been, in the writer's experience, associated with absence of post-partum hemorrhage in cases where it was anticipated, but this, of course, may have been a mere coincidence.

WALTER C. SWAYNE.

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## Reviews of Books.

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**Text-Book of Anatomy.** Edited by D. J. CUNNINGHAM, M.D.  
Second Edition. Pp. xxxiii., 1388. Edinburgh: Young  
J. Pentland. 1906.

This a formidable work, larger much than its apparent bulk indicates, and perhaps too large for the average student.

As far as possible it has been written by various anatomists trained in the Edinburgh School, so that it may well be termed the Edinburgh Text-Book of Anatomy.

In this second edition many improvements have been made, especially in the illustrations, which may now rank with the finest in any text-book.

Additions and corrections have been made in nearly every section. In the section on "Osteology," written by Professor Arthur Thomson, one notices many additions, and we would like to suggest many more, as well as corrections. We have referred in the review of another work to the unsatisfactory account of the chondro-cranium, and all that has been said there may be said with greater emphasis here, for by now the works of Froriep, Jacobi, Levi, and others have established beyond all question the real facts of the development of the chondro-cranium, and shown that it very materially differs from the account originally given by Wiedersheim. The account, too, of the chorda dorsalis must undergo revision, more especially with regard to its relation to the basilar plate. The account of the ossification of the skull bones is very largely based on the observations of Rambauss and Renault. Many of these have not stood the test of time, and, as a consequence, accounts based on them will require revision. The systematic description of the bones is, on the whole, very satisfactory, although we think much more might have been made of the distinguishing features of certain of the vertebræ and ribs, with a view to enabling the student to identify them.

The section on joints is satisfactory, if not particularly interesting; there is little fault to be found with that on the muscular system, by Paterson; but we certainly question the accuracy of the markings of muscular attachments to the coronoid process, as figured on page 243, and the insertion of the supinator brevis is represented as a continuous area on the radius, which is well known not to be the case. However, these are small points. As to the section on the "Peripheral Nervous System," it may at once be declared to be one of the best in the book, not only from its accuracy, but from its interest.

As might be expected, the "Central Nervous System" receives authoritative treatment at the hands of the Editor, who has been careful to profusely illustrate it with a series of drawings of transverse sections of the brain stem of surpassing excellence. We know of none which equal them. Great care has been taken to keep the matter up to date, and we are glad to see due prominence given to the valuable work of Elliot Smith, as well as that of Flechsig and Bruce. The student has certainly enough food for reflection in this section.

The articles on the "Organs of Special Sense" are exhaustive, and have, perhaps, a savour of Pestus about them. We regret to see Jacobson's cartilages illustrated by a drawing of a section of the nose of a kitten, for the conditions in the kitten and man are vastly different. It has long formed a subject of discussion, this peculiar position of the Jacobsonian organ in man. Both in the

textual description of the Jacobsonian organ, and in the chapter on "Embryology," this body is described as having a close relation to the Jacobsonian cartilage, whereas no such close relation exists, as may be seen in any coronal section of the human nose up to the third month.

It would be difficult to speak too highly of the chapter on "Embryology." It is admirably written and illustrated. Here and there a point or two might have been clearer, and the erroneous statements with reference to the Jacobsonian organ have already been alluded to. Fig. II. on page 41 is not credited to any animal, but certainly does not belong to man.

Birmingham's account of the digestive system remains much as he left it, and is an extremely accurate and interesting exposition of the "formalin" body.

The article on the "Lymphatics" has undergone a thorough revision, and has benefited materially by the publication of the great French work, *Poirier et Charpy*.

The book is completed by a section on "Surgical Anatomy," written by Stiles. This is a very satisfactory article. It brings into prominence Chiene's method of locating the various fissures and convolutions of the outer aspect of the hemisphere.

There will be found in the description of the prostate a curious contradiction of the description given by Dixon of the "capsule" of the prostate. Contradiction of this kind are almost inevitable in a book of this nature and magnitude, but this, we believe, is the only one in the book, which says much for the careful editing it has undergone.

It is not an easy task to "place" this book. Honestly, one hesitates to recommend it to the ordinary student; to the University student, or the student working for the "Fellowship" examination it ought to be essential, and as a guide to the researcher it is sufficiently stimulating. Its value to the last-mentioned would be greatly enhanced by a bibliography appended to each chapter.

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**Gallstones and Diseases of the Bile-Ducts.** By J. BLAND-SUTTON, F.R.C.S. Pp. vi., 233. London: James Nisbet & Co., Limited. 1907.

The book consists of a series of lectures delivered at the Middlesex Hospital. The various subjects are treated in a comparatively brief but lucid manner, and the work is not meant to compete with the larger monographs on these diseases.

It is a useful compendium for the student and practitioner rather than the operating surgeon. The indications for treatment are on orthodox lines, but the author holds strong views on the

desirability of performing cholecystectomy as a routine measure. This again is in accordance with the views of many surgeons, but there are arguments against, as well as for, this procedure. Because gallstones are recognised as a predisposing cause of cancer we are told that "it behoves surgeons when removing gallstones to excise the gall bladder;" but logically the removal of the stones is surely the essential need, and the desirability (if it exists) of performing cholecystectomy rests on other grounds.

There are some good illustrations and a few references at the end of the chapters.

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**Collected Papers on Circulation and Respiration.** By Sir LAUDER BRUNTON, M.D. First Series. Experimental. Pp. xiii., 696. London: Macmillan & Co., Limited. 1906.

There is no need for us to draw attention to the very valuable experimental work which has been carried out by Sir Lauder Brunton on problems connected with circulation and respiration. In this volume is collected a series of papers which was published by him between 1867 and 1883. These papers are exceedingly interesting, and there will doubtless be many who will be glad to have them all in one volume.

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**Applied Bacteriology.** By CRESACRE G. MOOR, M.A., F.I.C., with the co-operation of R. T. HEWLETT, M.D., D.P.H. Third Edition. Pp. 475. London: Baillière, Tindall & Cox. 1906.—The sub-title of this work—*An Elementary Handbook for the Use of Students of Hygiene, Medical Officers of Health, and Analysts*—indicates its scope. Its usefulness is demonstrated by the appearance of the Third Edition. The subject-matter has been brought well up to date, and the ground covered is sufficient for ordinary class work. In addition to micro-organisms, ferments are considered. There are chapters also on "Disinfection and Disinfectants" and on "Water, Air, &c." The illustrations are a little crude, and the thick paper makes the book inconveniently bulky.

**Lectures on Midwifery for Midwives.** By A. B. CALDER, M.B. Pp. xi., 274. London: Baillière, Tindall & Cox. 1906.—These lectures given in rather discursive style read very well, and most of the points required for a midwife are clearly indicated. In some of the chapters, especially those on mechanisms, it might have been easier to grasp the subject if it had been tabulated. It is always difficult to follow a description, even when in good English, which runs easily from one stage to another without



definitely marking off the other. The chapter on the child and its feeding is good and rational. A very useful lecture would have been one on those cases in which it is advisable to send for a doctor, this being one of the most important points in which to instruct the midwife. The application of the Midwives' Act is clearly set out, and should be useful. Auscultation is to be practised only by the ear, in many cases a wooden stethoscope is much more valuable. The plates, although small and crowded, are on the whole very useful. We think the book will certainly find a well-merited sale.

**Transactions of the American Pediatric Society.** Vol. XVII. New York: E. B. Treat and Co. 1906.—There is good scientific work exhibited in this volume. Congenital laryngeal stridor is shown to be due to a folded gutter-like epiglottis, which leaves merely a chink for breathing; this condition is always present to some extent in young children, and when excessive stridor appears it must not be confused with "thymic asthma." Very early gastro-enterostomy is favoured for congenital pyloric stenosis. Citrate of soda, three grains to the ounce of milk, is very useful in intestinal dyspepsia. Intubation for diphtheria should be performed earlier than is usual. Cortical decapsulation of the kidneys for severe chronic nephritis shows better results in children than adults. Milky pleural effusions, when not due to chyle or degenerated fat, are caused by altered albumins and globulins. Several of the other papers are worth reading.

**A Preliminary Inquiry concerning the Milk Supply of Schools.** By C. E. SHELLY, M.D. Pp. 11. London: J. & A. Churchill. 1906.—This is a report on an inquiry, inaugurated by the Medical Officers of Schools Association, with a view to determining what statistical evidence existed either for or against the practice of boiling or sterilising the milk supplied to schools. In response to a circular forty-three replies were received, of which forty-one have been tabulated. The figures obtained are curious, but although the returns include observations on a large number of children, the figures are not really sufficient for the purpose for which they were collected. If any lesson is to be learnt, it is that we should look rather towards the securing of a pure milk supply for protection against epidemic disease than attempt to guard against infection by boiling or otherwise treating the milk. The figures are handled dexterously but with much caution by the author, and the pamphlet will be found to be interesting and suggestive to those concerned in the feeding of children at boarding schools.

**A Manual of Diseases of the Eye.** By CHARLES H. MAY, M.D., and CLAUD WORTH. Pp. viii., 400. London: Baillière, Tindall & Cox. 1906.—This is an excellent text-book for the medical student; it covers the ground well, and is short and

concise. The statements contained are given in a crisp manner, and so are likely to remain in the mind of the reader, but on this account the perusal of the book is rather like reading a dictionary; still, also like a dictionary, it is full of information, and can be confidently recommended to the student or practitioner who is in a hurry for his knowledge.

**A Handbook of Diseases of the Nose and Pharynx.** By JAMES B. BALL, M.D. Fifth Edition. Pp. xii., 388. London: Baillière, Tindall & Cox. 1906.—A text-book which has rapidly run through four editions obviously has proved acceptable to students and practitioners, and it becomes all the more essential that the work should be accurate and up to date. The author has evidently spared no pains to make the many alterations and corrections that so soon become necessary in a relatively young and developing speciality, and yet without materially adding to the size of the book, which is worthy of the author's reputation.

**Davos as Health Resort.** Davos: Davos Printing Company, Ltd. 1906.—This book of 316 pages, forwarded to us by the Davos Public Interests Association, consists of a series of articles written by the best authorities in Davos, and with an introduction written by Dr. W. R. Huggard, H.B.M. Consul. The contributors, sprung from many different lands in Europe, have made Davos their more or less permanent home, and have acted in friendly co-operation in producing a book which gives the best information, historical, topographical, geological, ethnological, botanical, climatic, physiological, pathological and sociological, of a place which is of profound interest to those who have visited it, and will be of interest to those who read about it. Dr. Huggard commends the volume to his brethren at home, and trusts that they will find it as interesting as they will assuredly find the place when they make its acquaintance for themselves.

**The Climate of Lisbon, Mont Estoril and Cintra.** By Dr. D. G. DALGADO. Pp. viii., 50. London: H. K. Lewis. 1906.—This paper is an echo of the Fifteenth International Congress, held at Lisbon in April, 1906. It is in praise of two health resorts, and its object is to show: (1) That the climate of Lisbon in winter is not variable; (2) that Mont Estoril, as a winter health resort, is in many respects superior to Biarritz, Nice and Catania; and (3) that Cintra, "the most blessed spot in the habitable globe," of Southey, is a very desirable and charming health resort in summer, but not in winter. Those of us who visited Mont Estoril last spring can well realise that the Riviera of Portugal deserves fully to make a reputation for itself as a climatic health resort. Its salubrity has been known for ages, for the monks, excellent judges of a genial climate and of good cheer, selected Estoril and Cascaes

for their monasteries. It is now a very popular sea-bathing summer resort, but endeavours are being made to extend its popularity through the winter also.

**The Philippine Journal of Science.** Edited by PAUL C. FREER, M.D., Ph.D. Manila. 1906.—We have received Part VI. of this new journal, published by the Bureau of Science of the Government of the Philippine Islands. The inhabitants of these islands may be congratulated on the fact that they are able to produce such an excellent periodical, which must at once take a very high position amongst the scientific journals of the world. This may be accepted as the best evidence of good government, and one of the results arising from the good influence of the United States in their eastern colonies. The article on rinderpest, from the serum laboratory of the Bureau of Science, shows that the Government is using every effort to eradicate the disease. Those which follow, on geological and botanical topics, are illustrated by means of an excellent series of photographic plates. It will be difficult to maintain the standard of this and many other of the publications of the Bureau of Government Laboratories of Manila.

**On Physical Training in Schools,** by W. P. HERRINGHAM, M.D., and **The Influence on National Life of Military Training in Schools,** by T. C. HORSFALL. Pp. 12. London: J. and A. Churchill. 1906.—These essays are issued by the medical officers of Schools Association, and give very terse and useful evidence in support of the views of the National League for physical education and improvement. Dr. Herringham remarks that all boys and girls ought to go through systematic physical drill, and ought to be taught that it is their proper ambition to develop their bodies and to be as well grown and strong as they can. He quotes Almond, who used to speak of it as a religious duty, and of loafing and bad hygiene as physical sin. Mr. Horsfall is convinced "that very great good would come to English children and to the whole community from the introduction of military drill and instruction in shooting into all our schools, and that there would be no drawbacks to the advantages which it would give in improvement of health, increase of public spirit and patriotism, and of increase also of the safety of the nation."

**Sound and Rhythm.** By W. EDMUNDS. Pp. 96. London: Baillière, Tindall and Cox.—Children in primary schools being taught singing, the author has written this little book to suggest that it would be to their advantage to be also taught the mechanism of sound and hearing. The book is written as clearly and simply as possible; still we cannot help thinking that much of it, and specially the chapter on musical scales, would be beyond the comprehension of, at any rate, young children. The first two chapters deal with the production and

conduction of sound and with the wave form of sound vibration. The third chapter treats of musical scales and intervals, harmonies, consonance, dissonance, and beat tones, &c.; the fourth with organ pipes and resonance in tubes, and the fifth with "time" and movement as illustrated by different metre in poetry and in dancing. Chapter VI. deals with the anatomy and physiology of the ear, and connected with it are a series of models, those of the ossicles much enlarged being quite good; those of the temporal bone showing inner wall of tympanum, and ossicles with drum being quite useless, at any rate for those unacquainted with its anatomy. The book ends with a short chapter on the production of the voice and finally a description of the models. The subject of the book is an extremely interesting one, and we doubt if it would be possible to deal with it in a more lucid fashion. A number of illustrations add considerably to the value of the book.

**Supplementary Essays on the Cause and Prevention of Dental Caries.** By J. SIM WALLACE, M.D., D.Sc., L.D.S. Pp. vii., 81. London: Baillière, Tindall and Cox. 1906.—This is a book that every practitioner, medical and dental, should read with interest. It is very possible that he may not agree with much that the writer puts so forcibly and quaintly, but the book will make him think. It is calculated to disturb the complacency of anyone who imagines he knows all about dental caries. There is a most healthy want of reverence for generally received opinions.

**A System of Surgical Nursing.** By A. N. M'GREGOR, M.D. Pp. xi., 554. Glasgow: David Bryce and Son. [1905.]—This is a large work of 550 pages. There are a very large number of works on this subject now to be obtained, and it is hard to advise a nurse as to which is the best for them to get. Many are too much devoted to surgery, but this is quite an exception in this particular. Although the main surgical points are mentioned, there is in each case a fully detailed account of the nursing aspect. The chapter on dressings and on the preparation for operation are very good and concise. A few words on the removal of plaster of Paris would have been of advantage, as it is sometimes a very difficult process. It often happens that a breast has to be emptied of its milk, a proceeding requiring great care and experience, and it is therefore a pity that the detail of this proceeding has been omitted. There are no illustrations, though in a work of this sort we doubt whether this is a disadvantage. We are rather surprised that no mention has been made of the detail required in private nursing, in fact the subject is not mentioned. Undoubtedly the book is a very valuable one, and we should think is assured of a large sale.

**Practical Nursing.** By ISLA STEWART and HERBERT E. CUFF, M.D. New Edition. Pp. viii., 436. London: William Blackwood and Sons. 1904.—We have seldom met a book

which has upheld its title as well as this volume. It is practical from beginning to end—no mere list of duties strung together, but an entirely readable accumulation of facts written in good English and in excellent style. We have no desire to criticise the subject matter; it is what it is meant to be, and undoubtedly every nurse should read it. There are a few illustrations, and rather curious ones have been chosen—Buller's shield and Leiter's coils, both very seldom used. Perhaps it is for this reason that they have been selected; also two figures showing arteries being compressed in a somewhat awkward manner. We would advise medical students to look through this work; it is intensely interesting reading, and is sure to be appreciated.

**Le Livre de la Sage-Femme et de la Garde.** By Dr. R. DE SEIGNEUX. Pp. 62. Genève: Henry Kündig. 1905.—This is a short hand-book for midwives published in Geneva, the author being a *privat-docent* of the University. It is an excellent short practical manual, and is the more valuable since the author has incorporated with it a series of hints on the early symptoms and treatment of cancer of the uterus. While the instructions given in it are excellent and practical, we think that it errs on the side of brevity in one or two important particulars. For example, we do not think that the treatment of post-partum hemorrhage is sufficiently dealt with by instructing the midwife to massage the uterus, give ergot, and send for a medical practitioner. This complication is so dangerous and often so sudden that the directions for its treatment cannot be too full or too exhaustive. All possible measures should be described, and the order in which they are to be applied should be laid down. In a case of this kind the patient's life depends on the prompt application of the proper remedies by the person on the spot, and the midwife should not be confined to the measures described, since, if they should prove ineffectual, medical aid would arrive too late to save the patient. The hints as to the early symptoms of cancer of the uterus are most valuable, and cannot be too widely disseminated. A series of capital forms for case-taking are embodied in the book.

**Lectures upon the Nursing of Infectious Diseases.** By F. J. WOOLLACOTT, M.A., M.D. Pp. vii., 147. London: The Scientific Press, Limited. 1906.—Most books on nursing are too apt to be a dissertation on the various diseases with but little on the actual nursing. In this work the reverse is the case. For this reason it is a book of considerable value. True, the symptoms are stated and a very good account of the disease is given, but it is concise, and it is followed by nursing instructions which on every page show that the author has evidently not only an intimate knowledge of the practical side of the cases, but also he has been able to collect just those little points in nursing which it is generally so hard to get out of a book. We would recommend it highly to nurses and even to medical men.

## Editorial Notes.

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### **Dual Hospital Appointments.**

THE question as to whether it is or is not desirable that physicians or surgeons should have the option of holding office at more than one hospital has recently been the subject of discussion in Bristol, the committee of one of the largest medical charities having been opposed to the dual appointment of a member of their staff.

In this city we are perhaps especially fortunate in that our great medical charities are watched over and provided for by laymen who have devoted such an amount of time and money to the work they have taken in hand, that no one can doubt for one moment their single-hearted desire for the best interests of their respective institutions.

In approaching this or any question which concerns a great hospital, we must bear in mind that these institutions are really great public trusts, which exist, not for the benefit of medical practitioners, but in the first instance for the welfare of the patients who go to them for treatment, and secondly, for the advancement and teaching of medicine in all its branches; but it is obvious that the latter is in reality one of the essential factors in promoting the interests of the patients in any hospital.

The honorary staff of the particular hospital in question have pointed out that it is desirable that members of the staff "should be encouraged to practise as pure physicians and surgeons, because in that case they have more time to devote to hospital work, and therefore greater opportunities for the attainment of special knowledge and skill; and the charge of beds is an additional inducement to assistant-physicians and surgeons to adopt this line of practice." With this view we entirely agree, and would further add that we consider that those who hold appointments in the chief hospitals in a medical centre which desires and

expects a University status, ought to devote themselves to medicine, surgery, or one of the special branches, and not to engage in general practice.

It may prove desirable and necessary to lessen the number of physicians and surgeons at a hospital in order to provide sufficient scope for their acquiring the necessary experience in a limited field of practice ; but it is obviously to the best interests of any hospital to have a few masters of medical or surgical practice, rather than a larger number of general practitioners.

To leave it open to any physician or surgeon of a hospital to engage in any or every line of practice for gain, but to lay it down that the only restriction on his freedom is that he may not devote his spare time to acquiring further experience in his particular branch of medicine or surgery, not for gain but for pure love of, and keenness in, his profession, is surely to "strain at a gnat and swallow a camel."

Nothing redounds more to the credit of a hospital than to find that its physicians and surgeons are sought after, not only by the rich patients in the surrounding district, but by the smaller hospitals for the poor attending them, and we feel that it is only natural and right that the small hospitals should desire a "slice off the rich man's cake" for their own patients' benefit.

We have not touched on the question from the point of view of the physicians and surgeons on a hospital staff. But there is surely some right on their side to determine how far their liberty to employ their spare time shall be restricted by the charities they serve. If it is suggested that by serving more than one hospital any individual physician or surgeon might be overloading his time and energies, the same may be said of a large private practice, and it would be as reasonable to curtail the time he occupied in serving his private patients, or even acting in any public capacity, as to dictate limits to his services to the poor.

It is quite possible that there is room for improvement in hospital management, both in our own city and elsewhere, but any alterations must be carefully guided in the right direction, and any question that arises approached in an open

spirit, not by the Governors only, but by the doctors also, who are partners, not servants. Indeed, it is the reputation and enthusiasm of individual members of the staff on which the fame and status of any hospital mainly depends.

We have heard it said that the medical staff gain much from the prestige of their appointments; but although here in Bristol, as elsewhere, it is a privilege to be associated with a great hospital, any prestige arising therefrom is an asset created and maintained by medical men, not by the philanthropists to whom Bristol owes so much for providing the no less, but no more, essential buildings and necessary funds.

It is not, as some seem to imagine, the hospital which makes the man, but the man who makes the hospital, although in doing so he may bring credit to himself. To cite but a single example from the many names which have made Bristol hospitals renowned, we may point to Greig Smith, who made our Royal Infirmary known throughout the civilised world by his surgical work there. Yet how empty is all this reflected honour, for unless the individual man, like Greig Smith, gives far more than he takes, a hospital appointment proves for him of little or no value whatever; it is only a missed opportunity.

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**The  
Cossham Memorial  
Hospital.**

THE opening of this new hospital is an event which must prove of considerable importance to the district in which it is situated. The site is an ideal one, and the buildings placed upon it have been constructed with every possible care to make them as ideal as the grounds.

Arrangements are being made for fifty-two beds, and it is not intended that there shall be any out-patients. Every care is to be taken that the privileges and duties of the local medical men shall not be infringed. As the hospital is well endowed, there will be no need for any appeals to the philanthropy of the public; there will be no subscribers, and therefore no subscribers' letters of recommendation. With adequate funds for the purpose, it is



to be hoped that the services of the working staff shall in time receive due remuneration.

We give on another page an outline of the history and arrangements of the buildings and the constitution of the medical and resident staff.

The elevated position of the hospital, its isolation from any near buildings, its graceful style of architecture (early Georgian), and its central cupola with illuminated clock and Westminster chimes, will cause this hospital to become a prominent landmark, embellishing the whole district.

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## Notes on Preparations for the Sick.

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For any chemical analyses mentioned in the following report we are indebted to Mr. O. C. M. DAVIS, B.Sc., A.I.C., of the University College Laboratory.

**The "British Pharmaceutical Codex: an Imperial Dispensatory."**—An ideal pharmacopœia should satisfy three different requirements. First, it should contain all the drugs and chemicals in general use; secondly, it should contain such combinations of these as are commonly prescribed by medical men; and thirdly, it should serve as a standard for purity of drugs and chemicals, which will be recognised by those persons responsible for the sale and preparation of these articles.

In order to in any degree comply with these three requirements it is obviously necessary that a national pharmacopœia, such, for example, as the British Pharmacopœia, shall confine itself strictly to those drugs, chemicals and formulæ which are the most universally recognised and prescribed. It necessarily leaves to other and non-official formularies a multitude of formulæ of all kinds that, while in frequent use, are not in universal use.

From this arises one of the difficulties of modern prescribing. A prescriber wishes to order, perhaps, "Spirit Soap." He has been accustomed in his hospital work to order it and get a certain preparation. If he orders it in a different part of the country he is never sure of getting the same article unless he can specify the source of the formulæ on the prescription.

There are, of course, a number of excellent formularies in common use, "Squire" and "Martindale," for example, and these to some extent meet the difficulty.

The British Pharmaceutical Society are now preparing a work, to be termed the "British Pharmaceutical Codex," which will shortly be published, which will, it is hoped, meet all requirements. It will contain, besides drugs and chemicals, formulæ for acids, baths, bougies, cerates, drops, effervescent granules, elixirs, emulsions, enemas, gargles, gauzes, insufflations, mixtures, paints, tablets, &c., &c., &c. The galenical portion of the book will therefore include more preparations than any pharmacopœia yet published, and will therefore combine the features of a hospital pharmacopœia with those of the B. P.

It is hoped that every medical man will use the book, and prescribe from it. If he then order "Elixir—(Codex)," he will ensure always getting the same preparation dispensed without the delay entailed by the pharmacist having to ring him up before dispensing the prescription.

The book can now be ordered in advance, at 10s. 6d. per copy, from the Pharmaceutical Society, or, if desired, through the pharmacist at the Royal Infirmary. As soon as published, a copy can be seen at the Dispensary of the latter institution.

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**Alaxa.**—BURROUGHS, WELLCOME & Co., London.—Alaxa is an aromatic liqueur of cascara sagrada, which presents, in a most pleasant and acceptable condition, the laxative properties of the bark, in combination with stomachic and carminative principles. It is of agreeable flavour, and it exerts a marked tonic effect upon the bowel; it assures a normal activity, and renders unnecessary the use of after-dinner pills or digestive aids.

Alaxa is eminently suitable for use in the treatment of the constipation of pregnancy. It regulates the action of the bowel without producing irritation or griping. Whilst purgatives may adversely affect the course of pregnancy, the tonic laxative properties of alaxa maintain the normal bowel action, and prevent interference with the gravid uterus.

The dose is one to two fluid drachms, as may be required.

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**"Elixoid" Pine Tar Compound.**—BURROUGHS, WELLCOME & Co., London.—A pleasantly-flavoured fluid preparation, containing pinol, tar, terpin hydrate, Virginian prune, balsam of Tolu, and ipecacuanha. This combination is very effective in the treatment of affections of the respiratory organs, as its active components are excreted by the lungs, and thus exert a slow, steady and continuous action. It is believed to allay pulmonary irritation, and is of special service in chronic bronchitis and bronchorrhœa; it also relieves coughs, and may be used in cases in which the preparations of opium are inadvisable. Half to two fluid drachms may be given three or four times a day after meals.

**Nizin.**—BURROUGHS, WELLCOME & Co., London.—Under this name Messrs. Burroughs and Wellcome have introduced the zinc salt of sulphanilic acid, which is recommended for preparing antiseptic solutions and injections.

The antiseptic value of the sulphonic acids has been recognised for many years, and zinc-sulphocarbolate (the zinc salt of phenol-para-sulphonic acid) was included in the British Pharmacopœia as far back as 1885.

Sulphanilic acid (amido-benzene-para-sulphonic acid) differs from the phenol-sulphonic acids by the substitution of the amido group ( $-NH^2$ ) for the hydroxyl group ( $-OH$ ), and this small difference may cause a very profound change in the pharmacological action.

Whether Nizin is superior to zinc-sulphocarbolate or not must be determined by clinical observations, but we imagine it will prove equally valuable as an antiseptic, and less liable to cause irritation. The Soloid (gr. 7) affords a ready means of preparing fresh solutions for urethral injections and for eye-lotions.

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### The Library of the Bristol Medico-Chirurgical Society.

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*The following donations have been received since the publication  
of the List in March.*

|   | May 31st, 1907. |
|---|-----------------|
| J. Paul Bush, C.M.G. (1) .. .. .        | 3 volumes.      |
| L. M. Griffiths (2) .. .. .             | 10 „            |
| R. Shingleton Smith, M.D. (3) .. .. .   | 2 „             |
| William Warren Potter, M.D. (4) .. .. . | 4 „             |

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### SIXTY-FOURTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

|  |      |
|--|------|
| <b>Adami, J. G.</b> .. <i>Inflammation</i> .. .. .   | 1907 |
| <b>Allbutt and H. D. Rolleston, T. C.</b> <i>A System of Medicine.</i> Vol. II.,<br>Part 2 | 1907 |
| <b>Bland-Sutton, J.</b> <i>Gall-Stones and Diseases of the Bile-Ducts</i> .. .. .          | 1907 |
| <b>Buchanan, A. M.</b> <i>Manual of Anatomy.</i> Vol. II. .. .. .                          | 1907 |

- Chlorine, The Disinfectant Value of* . . . . . [N.D.]
- Cocks, W. P.** . . *Treatise on Operative Surgery* . . . . . (2) 1837
- Cripps, H.** . . *On Diseases of the Rectum and Anus* . . 3rd Ed. 1907
- " . . *Cancer of the Rectum* . . . . . 1907
- Crowley, R. H.** *The Need, Objects, and Method of the Medical Inspection of Primary Schools*. . . . . 1907
- Deanesly, E.** . . *Modern Methods of Diagnosis in Urinary Surgery* 1907
- Encyclopædia and Dictionary of Medicine and Surgery, Green's*  
Vol. IV. [1907]
- Feindel, H. Meige and E.** *Tics and their Treatment* (Trans. and Ed. by S. A. K. Wilson) . . . . . 1907
- Gadd, H. W.** . . *A Synopsis of the British Pharmacopœia* (1898)  
6th Ed. 1907
- Hare, H. A.** . . *Text-Book of the Practice of Medicine* . . 2nd Ed. 1907
- Herman, G. E.** *Diseases of Women* . . . . . [3rd Ed.] 1907
- " . . *First Lines in Midwifery* . . . . . New Ed. 1907
- Hope, Mrs.** . . *Memoir of James Hope, M.D.* (Ed. by K. Grant)  
(2) 2nd Ed. 1843
- Lange, F.** . . *Degeneration in Families* (Trans. by C. C. Sonne) 1907
- Latham, A.** . . *Pulmonary Consumption* . . . . . 3rd Ed. 1907
- Lettsom, J. C.** *Hints designed to promote Beneficence, &c.* . . (2)  
Vols. II., III. 1801
- Lister, Lord** . . *The Third Huxley Lecture* . . . . . (1) 1907
- Lloyd, W.** . . *Hay-Fever, Hay-Asthma* . . . . . 1907
- McKisack, H. L.** *A Dictionary of Medical Diagnosis* . . . . . 1907
- Meige and E. Feindel, H.** *Tics and their Treatment* (Trans. and Ed. by S. A. K. Wilson) . . . . . 1907
- Page, F. J. M.** *Elements of Physics* . . . . . 1907
- Palmer, "The Times" Report of the Trial of William* . . . . . (2) 1856
- Rabagliati, A.** *The Functions of Food in the Body* . . . . . 1907
- Ramsay, A. M.** *Eye Injuries* . . . . . 1907
- Rolleston, T. C. Allbutt and H. D.** *A System of Medicine* Vol. II.,  
Pt. 2 1907
- Von Noorden, C.** *Metabolism and Practical Medicine* (Ed. by I. Walker Hall). Vols. I., II. . . . . 1907
- Walker, J. W. T.** *The Renal Function in its Relation to Surgery* . . 1907
- Wells, J. W.** . . *The Influence of Cod-liver Oil on Tuberculosis* . . 1907

## TRANSACTIONS, REPORTS, JOURNALS, &amp;c.

- American Association of Obstetricians and Gynecologists, Transactions of the . . (4) Vols. XII., 1900; XV.—XVII. 1903—1905
- American Journal of the Medical Sciences, The . . Vol. CXXXII. 1906
- American Medicine . . . . . N.S., Vol. I. 1906
- American Society of Tropical Medicine, Papers of the Vol. II. 1905—1907
- American Surgical Association, Transactions of the . . Vol. XXIV. 1906
- Annales de Dermatologie et de Siphilographie . . . . . Tom. VII. 1906
- Archives de Neurologie . . . . . Tom. XXI., XXII. 1906

|  |                   |           |
|--|-------------------|-----------|
| Archives of Pediatrics .. .. .   | Vol. XXIII.       | 1906      |
| Australasian Medical Gazette, The .. .. .  | Vol. XXV.         | 1906      |
| Bookseller, The .. .. .  |                   | 1906      |
| Bristol Medico-Chirurgical Journal, The .. .. .  | Vol. XXIV.        | 1906      |
| British Journal of Children's Diseases, The .. .. .  | Vol. III.         | 1906      |
| British Journal of Dermatology, The .. .. .  | Vol. XVIII.       | 1906      |
| Bulletin de l'Académie de Médecine .. .. .   | Tom. LV., LVI.    | 1906      |
| Bulletin de l'Académie royale de Belgique .. .. .  | Tom. XX.          | 1906      |
| Canadian Practitioner and Review, The .. .. .  | Vol. XXXI.        | 1906      |
| College of Physicians of Philadelphia, Transactions of the .. .. .   | Vol. XXVIII.      | 1906      |
| Congrès (XV <sup>me</sup> ) international de Médecine, 1906 (3) Sect. de Médecine, 2 parts, 1906; (1) Chirurgie, 2 parts .. .. . |                   | 1906—1907 |
| Contributions from the Department of Neurology, Harvard Medical School .. .. .   | Vol. II.          | 1907      |
| Gazette des Hôpitaux de Toulouse .. .. .   |                   | 1906      |
| Hospital, The .. .. .  | Vol. XL.          | 1906      |
| Hospital—  |                   |           |
| Johns Hopkins Hospital Reports .. .. .   | Vols. XIII., XIV. | 1906      |
| Indian Medical Gazette .. .. .   | Vol. XLI.         | 1906      |
| Johns Hopkins Hospital Bulletin .. .. .  | Vol. XVII.        | 1906      |
| Journal of Hygiene, The .. .. .  | Vol. VI.          | 1906      |
| Journal of Mental Science, The .. .. .   | Vol. LII.         | 1906      |
| Journal of Nervous and Mental Disease, The .. .. .   | Vol. XXXIII.      | 1906      |
| Journal of Obstetrics and Gynæcology, The .. .. .  | Vol. X.           | 1906      |
| Journal of the American Medical Association, The .. .. .   | Vol. XLVII.       | 1906      |
| Journal of the Royal Sanitary Institute .. .. .  | Vol. XXVII.       | 1904      |
| Library, The .. .. .   | N.S., Vol. VII.   | 1906      |
| Lunacy, 31st Report of the Commissioners in .. .. .  | (2)               | 1877      |
| Luzerne County Medical Society, Transactions of the .. .. .  | Vol. XIV.         | 1906      |
| Medical Annual, The .. .. .  |                   | 1907      |
| Medical Record .. .. .   | Vol. LXX.         | 1906      |
| Montreal Medical Journal, The .. .. .  | Vol. XXXIV.       | [1905]    |
| Münchener medizinische Wochenschrift .. .. .   | Bd. II. für       | 1906      |
| Northumberland and Durham Medical Journal, The .. .. .   |                   | 1906      |
| Post-Graduate, The .. .. .   | Vol. XXI.         | 1906      |
| Progressive Medicine .. .. .   | Vol. I.           | 1907      |
| Revue générale d'Ophthalmologie .. .. .  | Tom. XXV.         | 1906      |
| Rhode Island Medical Society, Transactions of the .. .. .  | Vol. VII., Pt. 3  | 1906      |
| Smithsonian Report for 1905 .. .. .  |                   | 1906      |
| Therapeutic Gazette, The .. .. .   | Vol. XXX.         | 1906      |
| Treatment .. .. .  | Vol. X.           | 1906      |
| Wiener klinische Wochenschrift .. .. .   |                   | 1906      |
| Zentralblatt für innere Medicin .. .. .  |                   | 1906      |

## MEETINGS OF SOCIETIES.

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### Bristol Medico-Chirurgical Society.

March 13th, 1907.

Mr. JAMES TAYLOR, President, in the Chair.

The meeting was devoted to the consideration of **Cases and Specimens** illustrating various phases of **Syphilis**.

Professor WALKER HALL and Dr. CAREY COOMBS demonstrated **Pathological Specimens**, macro- and microscopical.

Dr. MICHELL CLARKE showed sections illustrating **Syphilitic Diseases of the Brain and Spinal Cord**.

The following cases were shown:—**Charcot's Disease of the Knee Joints**, by Dr. ALEXANDER; **Disseminated Choroiditis**, by Dr. OGILVY; **Relapsing Chancre, Spontaneous Fracture of Tibia**, and **Tertiary Periostitis of Radius**, by Mr. HEY GROVES; **Secondary Syphilis with Sloughing Tonsil and Suppurating Glands in the Neck, Necrosis of the Lower Jaw, Congenital Ulceration of the Nares and Palate**, and **Recurrent Gummatous Ulceration of the Scalp**, by Dr. KENNETH WILLS.

Patient treated with **Intra-muscular Injections of Lactate of Mercury**, and a patient with a **Tubercular Syphillide**, the disease having been acquired innocently, by Dr. NIXON.

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April 10th, 1907.

Mr. JAMES TAYLOR, President, in the Chair.

Mr. C. A. MORTON showed a specimen of **Large Ovarian Tumour**, weighing 10½ lb. and measuring 13 in. by 10 in. by 6 in., which had been removed from a child of ten years of age. Sections showed the tumour was an adeno-sarcoma.

Dr. E. C. WILLIAMS showed (1) A boy with **Enlarged Liver and Spleen**. The spleen, first noticed about Christmas last, extended downwards nearly to the iliac crest and forwards to the middle line. The liver edge could be felt two inches below the costal margin. There was slight jaundice, slight clubbing of the fingers and toes. There was a faint systolic murmur at the heart's apex. Leucocytosis was distinct, pointing to the presence of an infective agent. The disease did not appear to be due to any of the exanthemata. (2) A case of **Sporadic Cretinism** in a girl aged 3½ years, after six months' treatment with thyroid extract. There had been very marked improvement. Nothing abnormal had

been noticed in the child until after whooping-cough at four months of age.

Dr. EDGEWORTH read notes on a case of **Double Consciousness**. In the dreams of sleep there is no sharp division between perceptions and conceptions, for the latter are projected and have the character of perceptions; secondly, in dreams, there is an entire absence of logical control; and thirdly, the emotional side of mental processes is exaggerated. The condition of hypnosis is closely related to that of dream-consciousness. Some of the hypnotised remember the events of the hypnotic state; others entirely forget them on waking. In spontaneous somnambulism the individual possesses sense-perceptions and translates his motor ideas into acts. The condition of double personality is clearly akin to somnambulism, but differs from it in that its onset is in waking life, and also in its prolonged duration. The example the speaker described was that of a man who found himself, he thought, in Old Market Street, Bristol, and asked his way to the police station, but could not tell his name nor where he came from, nor how he happened to be in Bristol. He was brought to the Royal Infirmary. A clue was found through his shirt markings, and it was discovered that a man had been missing from the town so discovered. A police officer, armed with this information, asked the man if he was Mr. — of a certain town. The man said yes, with astonishment. In a little while the man's memory returned, but he could not recall leaving his native town, nor any event since then until coming partly to himself in Old Market Street. He had been missing from home a month, but what he had done in that month remains a mystery. There are many similar cases on record. In one, the man when hypnotised recollected what he had done during six weeks of aberration, but could not recollect it unless hypnotised. It is the subconscious or infra-liminal ideas, thoughts, sensations and perceptions which form the basis of dream-consciousness, somnambulism, hypnosis and double personality.

Dr. WALTER SWAYNE read a paper on **Cerebral Complications in Pregnancy and Parturition**.

Dr. CAREY COOMBS read a paper on **Rheumatic Carditis in Childhood**.

Dr. BERTRAM ROGERS read notes on a case of **Sclerodermia with Trophic Lesions**.

J. LACY FIRTH.

H. F. MOLE, *Hon. Sec.*

## Local Medical Notes.

**University College, Bristol.**—*Examination Results.*—The following successes have recently been gained:—

CONJOINT BOARD.—*Biology*: B. G. Derry, A. G. T. Fisher, G. H. Piercy. *Anatomy and Physiology*: R. C. Clarke, J. F. H. Morgan. *Medicine*: J. W. J. Willcox.\* *Surgery*: A. E. Iles, E. J. Dermott, P. S. Connellan,\* C. E. K. Herapath.\* *Midwifery*: R. G. Vaughan.

L.D.S.—*Chemistry and Physics*: F. C. Willows. *Mechanical Dentistry and Dental Metallurgy*: G. F. Fawn, W. E. Drummond, I. R. Hudleston, P. J. Burton. *Final Examination*: C. A. Joll.\* *Part II. only*: W. H. Ireland.\*

L.S.A.—*Medicine (Part I.) and Forensic Medicine*: J. F. McQueen.

*Appointments.*—D. S. Davies, M.D. Lond., has been appointed Examiner in State Medicine for the University of London. C. E. K. Herapath, M.R.C.S., L.R.C.P., has been appointed Casualty Officer at the Bristol Royal Infirmary, Cyril C. Lavington, M.B., B.S. Durh., has been appointed Out-Patient Physician to the Bristol Children's Hospital. Frederick H. Rudge, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Torbay Hospital, Torquay. E. H. E. Stack, M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Bristol Eye Dispensary.

**Bristol General Hospital.**—As mentioned in our last issue, a public appeal has been made for £18,000 for this institution for greatly needed improvements. It is announced that £15,550 have already been promised, and it is hoped that the remainder will be obtained shortly.

**Royal United Hospital, Bath.**—The late Dr. Thomas J. Bennett, formerly of Tunbridge Wells, has bequeathed the whole of his estate, subject to certain legacies, amounting to £20,000 to this institution. This sum will be devoted to the augmentation of the permanent endowment of the hospital. This legacy will not interfere with the efforts of the Mayor of Bath, who is trying to extinguish the debt of £6,000 against the hospital.

**Royal Mineral Water Hospital, Bath.**—At the annual meeting of this institution held recently it was stated that 1,185 in-patients had been admitted during 1906, an increase of 24 compared with 1905. The average daily number of occupied beds was 145. An unfavourable balance of £214 on the year's working was reported.

**Winsley Sanatorium, Bath.**—At a recent meeting of the House

\* Completes examination.



Committee it was pointed out that certain beds could now be allocated to persons residing within the counties of Somerset, Gloucester and Wilts, on payment of 35s. per week, and persons living outside these districts could be admitted for £2 10s. weekly, provided there were vacant beds not required by residents of the three counties. Application should be made to the Secretary.

**Cardiff Infirmary.**—In the annual report of this institution an appeal has been made for £30,000 in order to accommodate sixty-four additional in-patients, bringing the total number of beds up to 250. The infirmary serves a district comprising a population approaching half a million, and there are constantly between 500 and 600 patients awaiting admission. A promise of £5,000 has already been received provided the remaining £25,000 are subscribed within six months.

**Royal Devon and Exeter Hospital, Exeter.**—At a meeting of the Governors held recently it was reported that the adverse balance against the institution amounted to £1,392, being £866 more than last year. The chairman pleaded for more general support, failing which more funded stock would have to be sold.

**The Workmen's Compensation Act.**—An interesting case, bristling with medical technicalities and details, was heard in a local County Court recently. The applicant was a pork butcher's assistant, aged 26, who sustained an accident on the 2nd October, 1906, straining himself by lifting a heavy lead-lined pickle-tub. His statement was that he felt something had gone wrong, and pain had come in his left shoulder when he got home. He worked on and did not seek medical advice from his club doctor until five weeks after the alleged accident, on a day when he asserted that he fainted while standing at his own fireside doing nothing. During the long period between the accident and this the pains grew gradually worse, and in his own words, his heart "did beat very hard." He was treated for a month in a local hospital, and there seems to have been some doubt as to the diagnosis. The disease, however, was designated subclavian aneurysm. Later on the man brought an action against his master on the grounds that he had sustained an injury in the course of his employment which determined the illness.

Ample scope was given during the inquiry at the Court for the minute discussion of aneurysm in all its bearings. Counsel for the respondent, with his then knowledge of the subject, would have little difficulty in satisfying any medical examining board. Medical witnesses were at the table *vis-à-vis*, and much interest was taken in the case. The point originally raised was that the applicant had strained an artery under the collar bone. What was the disease. Was it aneurysm or something of a less grave nature?

The Ocean Accident Company sent down one of their medical referees, who with one of the local doctors minutely examined the applicant. Separately at first, and then together, they concluded that the man had no aneurysmal dilatation whatever.

When the case came on for hearing, the diagnosis suddenly veered round from the region of the subclavian artery to the arch of the aorta. Physical signs were adduced—an accentuated second aortic sound and a loud and distinct murmur conducted towards the axilla. There was some pulsation above the clavicle, and the medical witness could feel the artery quite distinctly.

By His Honour the Judge: "And what was your deduction from this?"

Answer: "That the man had strained the arch of the aorta." Later on, in reply to the Counsel for the respondent: "The aneurysm was traumatic, not spontaneous."

Another medical man had examined the patient and signed the disease up as subclavian aneurysm. This was a lever for further cross-examination.

"Would you agree or disagree with this diagnosis?"—"I should not entirely agree."

"Then you disagree on that?"—"I do not entirely disagree. Aneurysms may be of different degrees. I consider it was the beginning of the dilatation which ultimately leads to serious aneurysm."

The Judge: "You say there was aneurysm, but it was so small as not to appreciably make itself apparent?"

Answer: "There was no swelling, but there was undoubtedly slight aneurysm."

By the Counsel: "Was there or was there not an aneurysm? . . . I cannot accept your answer unless you tell me where mere dilatation ends and aneurysm begins."

Answer: "I should say in this sense there was an aneurysm."

Further on by the medical witness: "He is better, he is comparatively well."

The medical opinions on behalf of the respondent were to the effect that the man did not suffer from aneurysm, and had no signs of ever having had such.

The Judge asked whether a small aneurysm in November might not have disappeared in April.

Answer by one witness: "It would have been so small that it could not be diagnosed." Later: "The first and essential step in diagnosing an aneurysm is the presence of a tumour or swelling."

On the question of the man's symptoms the Judge cross-examined one of the medical witnesses:

"Did not the strain of the accident cause all that the medical witness for the applicant had described—Yes or No?—palpitation, for instance, which the man stated he still suffered from six months after the accident."

The Judge seemed very irritated by the medical witness giving a qualifying answer.

"Would not a bicycle ridden too hard cause palpitation—Yes or No?"

The character of the man's pain was scarcely that which one would have expected in an aneurysmal dilatation of the aorta, as he described it, "in his left shoulder shooting up to his ear and down into his heart." The pain was persistent since the accident six months ago.

The decision arrived at by His Honour was easily anticipated. He had to determine whether the applicant's illness was due to an accident, and if so, what was the cause of the accident, and whether it arose in the course of the man's employment. He found that the applicant did meet with an injury from the lifting of the pickle-tub, that he was subsequently ill owing to an undue strain, and he was still suffering from it. Incidentally he remarked that he had had two doctors before him who formed an opposite opinion, but he had to consider what was the means of knowledge they had in forming their opinion. They did not see the man until a long time after the accident, and therefore it was very difficult for them to say what was the cause of an illness that commenced months and months before.

**Cossham Memorial Hospital.**—The late Mr. Handel Cossham, who had represented in Parliament this division of Bristol—the East—for several years and until his death, left in his will his residuary estate for the purpose of establishing a hospital. He had no children, but left a widow, and as he was never considered a wealthy man, it seems most likely that the charitable institution that was present to his mind—generous and beneficent as it was—would at the most be a fair-sized Cottage Hospital.

Owing to various circumstances the estate got into Chancery, and this occasioned a considerable delay in the winding-up. Strange to say, this delay was a fortunate thing, for the Trustees had to manage the collieries and keep them going, and luckily they fell upon very good times in the coal trade, which is always a fluctuating one, and made excellent profits. Not only so, but the collieries were sold at the top of the financial wave; and so, in the end, the grand total of £120,000 was in hand for building and endowment. The site chosen is at the top of Lodge Hill, in the parish of Fishponds, but in close proximity to the populous district of Kingswood; and with the land around the hospital, and two well-made private roads, consists of nearly fifty acres. The ground is high—the highest in the district—and is about 350 feet above sea-level. It commands a most extensive prospect, and especially from the balcony on the central tower. To the north are the Cotswolds, about Wotton-under-Edge; to the east Kelston and Lansdown hills and the Bath districts; to the south the Mendips; and more westerly Bristol itself; whilst to the

west are the Severn Valley, the Forest of Dean, and the distant hills of Wales.

The neighbourhood is also a historical one. Years ago it formed part of the king's wood, and almost within a stone's throw of the hospital is a large round brick tower, which is said to represent a hunting-tower in the reign of King John. Below Lodge Hill on the western side runs "The Causeway," an old Roman road to Bath.

The building itself is very imposing, being constructed of the grey stone of the neighbourhood, faced with the best Bath or Corsham stone. The centre block contains the entrance hall, surgeon's and matron's sitting rooms, the reception and board rooms, the surgery, dispensary, and at the back the kitchens and offices. On the western side rises up the tower, already spoken of. This tower has a copper-covered cupola and an illuminated clock (four faced, and furnished with the Westminster chimés). This clock is connected by electric wires with all the time-pieces in the establishment, so that everywhere the time is synchronous. Near this tower, at its base, are the two surgical wards, male and female, and also the great staircase leading up to the first floor, where are also two similar wards, the medical male and female. On the ground floor, to the south of the wards, is the operating theatre. This is one of the handsomest and the best equipped in the country. The floor is laid with white square tiles, slightly toughened on the surface; the walls are covered with pale green-coloured tiles, highly vitrified and known as "Brit-Opal," made and placed by the Adamant Co., Ltd., Birmingham. Above the cornice line white tiles are used, and carried up into the lantern, which gives light and assists also in the ventilation of the theatre. Where the floor level ends the edges are mitred and decorated with darker tiles, so that here and wherever edges meet, so to speak, everything is rounded off, leaving no edges anywhere for dust or germs to rest. All the tiles are embedded in Portland cement, and secured in place with Birmingham cement. On each side of the theatre is a large radiator, heated with low-pressure steam, and guaranteed by the contractors—Messrs. Bradford—to give a temperature of 75° F. on the coldest winter night. Behind each radiator is an inlet for cold fresh air, and a continuous circulation of air is maintained by two fans in the ceiling. Leading into the theatre are two smaller rooms, all constructed with the same materials, the anæsthetising room and the sterilising one. The sanitary arrangements consist of lavatories, tanks and ample discharge pipes, which terminate in a deep glazed channel which runs the length of one side of the floor.

The water supply consists of pure hot and cold sterilised and ordinary hot and cold water. The supply is introduced by means of copper pipes, including the necessary ties and clips,

$\frac{1}{2}$ -inch hot and cold water, quarter-turn taps, and wrist-action taps, sprays and douches.

The four wards are all the same size. They are large and spacious, and will furnish ample cubic capacity for the ten adult beds and two cots which are being placed in each one. The floors are laid with cement, and covered with teak blocks. The patients' lockers are also of teak, with brass fittings, and the chairs made of dark-stained wood, all of which will form a good contrast to the best Lawson-Tait bedsteads in white enamel and the bright-coloured bedspreads. In the centre of each ward is a stove, which can be used for extra warming should the radiators alongside the walls be insufficient in cold weather, and near each stove a handsome plate-glass covered table, fitted with drawers at each end.

Leading out of the far end of each ward are lavatories and w.c.'s, furnished with the most approved fittings, and on each floor is a very commodious ward kitchen and larder. Adjoining the wards on each floor there is a day room for patients, the one on the ground floor for females, and the one above for males. This latter one has a covered open-air space and an open balcony, where the men may smoke at times. On each floor are bathrooms for the patients. At the north end of the building are the isolation wards. These are separated from the rest of the building by double doors and an intervening corridor. There are wards on each floor, with separate offices, and nurses' sitting and sleeping rooms. Connected with these wards is an out-door spiral staircase, which can be used in cases of emergency. The same arrangements exist for the other main wards.

In the basement are various offices, but worthy of special note are a dark room for photography, an X-ray chamber, and the *post-mortem* room.

Beyond the main building, westward, is another distinct block, where are the laundry, engine-room, stable, coach-house, and mortuary.

As the capabilities of the hospital in every way are beyond those of the ordinary cottage hospital, the Committee determined to have an honorary working staff and an honorary consulting staff commensurate with these surroundings. The honorary consulting staff is represented by two physicians and two surgeons, and these are respectively Dr. Shingleton Smith and Dr. J. Odery Symes, and Mr. C. A. Morton and Dr. James Swain. The honorary working staff is Dr. Nixon and Dr. Bertram Rogers as the physicians, and Dr. E. Hey Groves and Dr. Stack as surgeons. Mr. A. L. Flemming has been appointed anaesthetist. The house surgeon is Dr. G. C. Mort, of the Victoria University, Manchester, and the matron, Miss Maun, late of the Infirmary, Gloucester.

# The Bristol Medico-Chirurgical Journal.

*"Scire est nescire, nisi id me  
Scire alius sciret."*

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SEPTEMBER, 1907.

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## RHEUMATIC CARDITIS IN CHILDHOOD.

BY

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THESE remarks are prompted by a survey of four recent autopsies and sixty-five cases seen during the past few years. For my pathological notes I am indebted to Dr. Michell Clarke, Dr. Cecil Williams, and Dr. T. E. Holmes. Of the clinical cases twenty-four are my own out-patients, and the remainder in-patients at St. Mary's Hospital and at the Children's Hospital, Bristol, the notes of which I am able to use by the kindness of those physicians under whom the children were admitted. The in-patients show a larger percentage of severe types of carditis than the out-patients, as one might expect. Of seventy-five children seen in Bristol with various rheumatic disorders, forty-five, or 60 per cent., had rheumatic carditis. Forty of the cases are girls, twenty-five boys ; the boys are relatively more liable to the severer forms of rheumatic heart disease. The age at which the first evidence of rheumatic

infection was seen varied from  $3\frac{1}{2}$  to 14, and averaged 8. In only six, at the most, did the cardiac symptoms precede other rheumatic phenomena.

The pathology of rheumatic carditis presents four salient points. *First*, it is a carditis; for example, in my four autopsies the endocardium and myocardium were inflamed in each instance, and the pericardium three times. *Second*, the rheumatic infection is blood-borne, and attacks the heart just as it would any other organ, by way of its own special nutritional blood supply, in this instance the coronary arteries. That this is so is suggested by the simultaneous invasion of all three layers of the cardiac wall and by the position of the lesions, periarterial in the muscular and primarily subendothelial in the serous layers. Further, acute arteritis and other infective lesions may be met with in the coronary arteries in rheumatic carditis. In my four cases there was subendothelial fatty change at the root of the aorta, in the area fed from the coronary arteries. *Third*, the gravity of rheumatic carditis in the earliest or "childhood" stage lies mainly in the damage done to the muscle. This is on a priori grounds to be expected; the heart's main functions are muscular, and the serous layers clothing the myocardium are merely accessories to the easy and effective performance of those functions. Both clinically and after death the great feature of acute rheumatic carditis is ventricular dilatation, as has been so ably shown by Dr. Lees and Poynton.<sup>2</sup> In later years the permanent serous lesions become important; by that time the myocardium shows little trace either in its histology or in its functional capabilities of the damage inflicted upon it at the time of the invasion. *Fourth*, rheumatic carditis, like all rheumatic lesions, is remarkably apt to recur—or should it be said to recrudescence? Perhaps the infective agent lies quiet in the cardiac tissues awaiting opportunity to reassert itself; perhaps it is stored elsewhere in the body, and issues thence at intervals to infect the heart again. It is worthy of remark that in all my four autopsies (and in others I have seen)

<sup>1</sup> For larger statistics see Poynton, *Med.-Chir. Tr.*, 1899, lxxxii. 355. This paper is referred to later in this article.

<sup>2</sup> *Med.-Chir. Tr.*, 1898, lxxxii. 419.

the interbronchial lymph-glands were much enlarged. Be this as it may, certain it is that the recurrences lead to the establishment of permanent fibrosis, eventually more important in the serous than in the muscular layers ; in the early acute stages, however, it is the myocarditis that kills.

This way of regarding rheumatic heart disease, that is, as a carditis principally important in childhood by reason of the muscular lesions, is confirmed by clinical experience. Of my sixty-five cases, no less than thirty-eight presented certain physical signs about to be described ; and of the remaining twenty-seven, ten were of the same kind, but the signs were incompletely developed. They were like enough to those in the larger group, however, to make one think them due to the same pathological process occurring in a less severe degree.

The typical physical signs are as follows. On inspection, the impulse is seen over an area extending from the left sternal border, or even from the right of the sternum, to an inch or more outside the left mammary line, and from the third left space above to the fifth or sixth left space below. It is usually possible to see that the impulse is wavelike or peristaltic in character ; the wave begins at the sternal ends of the third and fourth left spaces, and travels downwards and outwards to disappear outside the nipple in the fifth or sixth left space. As it reaches this latter extreme an apparent sinking-in is noticed in those spaces where the wave was first seen. This gives an impression of systolic retraction, yet it is in reality not a retraction but merely a rebound, the chest-wall falling back into the position which it occupied before it was thrust forward by the contracting heart. The point of maximum impulse is at or external to the left mammary line, usually in the fifth space ; here it is so firm and well-sustained in the average quiescent case as to prove the presence of ventricular hypertrophy. At the inner end of the third left space a sharp diastolic shock is felt, presumably due to an abrupt forcible closure of the pulmonary valves under the influence of hypertension in the lesser circulation. Sometimes the peristalsis I have described is so vibratile as to give the impression of a presystolic thrill ; this, however, is never so rough, powerful and



definite as the thrill of mitral stenosis. I have felt a systolic thrill at and external to the apex. The deep cardiac dulness is transversely increased both to right and to left; it may even extend from the right mammary line to the left mid-axillary line.

The auscultatory signs at the apex show a certain progress. The first departure from the normal is a lengthening and blurring of the first sound; then a definite systolic bruit develops after the first sound, which may finally replace it. This is transmitted into the axilla and, of course, indicates mitral leakage. Next the apical second sound becomes doubled, and then, but often not till some time after, a murmur is added to the second half of this second sound. This, hard to distinguish at first, lengthens and strengthens till at last it runs into the beginning of the next cycle, becoming, in fact, a presystolic murmur. This is not as rough and loud as that of mitral obstruction, and it is not due to valvular disease.

At the base the only noteworthy feature is a tremendous accentuation of the pulmonic second sound, which is often doubled also; the explanation of this accentuation is, of course, the usual one—raised tension in the pulmonary artery.

Now these signs—outward displacement of the apex-beat, widened area of impulse, abnormally ready perception of the peristaltic nature of systole, increase of the transverse cardiac dulness on both sides, the murmur of mitral incompetence, and the signs of raised pulmonary tension—are all due to a dilatation of both ventricles. That there is hypertrophy is suggested by the firm character of the impulse at its maximum point; but the principal feature is dilatation. The ventricles have stretched because their walls are atonic, and the atony is due to the action of the rheumatic virus upon the myocardium.

From time to time the dilatation, which has been partially recovered from in the interval, is acutely exaggerated by a fresh infection of the heart muscle; not infrequently this is so damaging to the myocardial cells as to lead to a fatal asystole. *Post-mortem*, the heart is enlarged transversely and globular, owing to ventricular dilatation; the auriculo-ventricular orifices are stretched, and the ventricular walls are thickened. The muscle

may be pale, but naked-eye changes are usually insignificant. There may or may not be evidences of pericardial or endocardial infection; more often than not such lesions are present, but of no great gravity. Sections of the myocardium show perivascular areas of leucocytosis with proliferative inflammation of the stroma, leading eventually to a permanent fibrosis; and in the parenchyma loss of striation and fatty change.<sup>1</sup>

Three of the cases I examined *post-mortem* had during life presented those signs which have been already described; in two of them there was in addition a pericardial rub, and in these two there was an early fibrinous pericarditis. In all three the valves were inflamed—the mitral in three, the aorta in two, and tricuspid in one; the lesions were of the usual type, circumscribed nodules capped with a little fibrin. In none of the three, however, were these lesions sufficient to account for death, or even for cardiac embarrassment; but in all three there was considerable ventricular dilatation, associated with some thickening of the muscle, and with the microscopical appearances already mentioned as occurring in the myocardium.

In the fourth case there were similar myocardial and valvular changes, but in addition there were lesions of the pericardium, which during life had notably altered the physical signs from those already described. The modifications which may thus arise from special types of inflammatory change in the serous layers remain to be outlined.

In both endocardium and pericardium the reaction to rheumatic infection may for convenience sake be divided into three stages: the acute, the recurrent, and the cicatricial. It is with the first two that childhood is mainly concerned. In the pericardium (to consider the first) there is a more or less acute reaction to the first invasion, which occurs, of course, by way of the coronary circulation; as this subsides the fibrin which has been thrown down is partly reabsorbed and partly used as the basis for new fibrous tissue. Recurrences (or recrudescences) take place repeatedly, and the pericardial sac is gradually obliterated; but

<sup>1</sup> See papers by Poynton (*Lancet*, 1900, i. 1352), Fisher (*Lancet*, 1902, i. 1594), West, Herringham, Carpenter and others.

it is only when there are also pericardio-mediastinal adhesions that really grave and specific effects are produced, and in such cases cardiac failure is much more likely to occur than in the absence of this complication. Clinically, the acute is not the commonest phase of rheumatic pericarditis in childhood: only one true example occurred in my sixty-five cases. It is characterised by rapid increase in the area of cardiac dulness, which is due to ventricular dilatation, and not to effusion of fluid (which, as Poynton's figures show, is rare, if not unknown, in rheumatic carditis), and by a friction sound over the whole præcordium. It appears to terminate in resolution, but in reality it leads to the first instalment of those obliterating adhesions already spoken of.

The recurrent stage is commonest clinically; it was exemplified by six of my cases, five of whom were boys. Slight pyrexia, with dyspnœa and perhaps cardiac pain, leads to an examination of the heart, which is found dilated; friction sounds are heard, often for a day or two only, over a limited fraction of the præcordium, and the whole attack soon subsides. Probably its real nature is often overlooked, especially as the rub may be pleuro-pericardial and respiratory in rhythm.

There was no good example of the cicatricial stage among my sixty-five children; adhesions strong and dense enough to produce systolic recession take so long in building that childhood is gone before signs appear. My fourth autopsy was, however, upon a case of this type, a boy of 13, admitted to the Bristol General Hospital under Dr. Michell Clarke. The heart was encased in a dense mat of adhesions, fully half an inch thick over the ventricles. Myocarditis was proved by microscopy, and the valves were beaded. The adhesions bound the pericardial layers together and the heart as a whole to the surrounding tissues. This boy had during life shown unmistakable systolic recession.

Rheumatic infection of the endocardium is usually limited by the local reactive processes to the deeper parts of the valves, where it arrives by way of the coronary circulation; circumscribed nodules are formed, and permanent cicatrization generally, if not invariably, follows. Sometimes, however, the resistance

is lowered either locally by preformed fibrosis, or generally by some malnutritive state, and the organisms find their way to the surface of the valve, forming an infective ulcer, "pointing," in fact, into the cardiac cavity. How is the first type, the commoner circumscribed form of endocarditis, to be linked with the extreme cicatrisation seen in ordinary mitral stenosis? Is there constant irritation by a latent infection, or are there repeated reinfections? This cannot as yet be answered; all that can be definitely said is that advanced cicatrisation is not common before the age of 16.

Clinically, the circumscribed type of rheumatic endocarditis is perceptible in its acute stage only when the aortic valves are swollen, and by no means always then. The only evidence is a diastolic bruit, usually very indistinct, for the cicatricial stage must be reached before the ordinary signs of aortic insufficiency are noted. In at least one of my cases an aortic regurgitant murmur appeared and disappeared again in so short a time as to leave an impression of subsiding inflammation which had temporarily crippled the valve. A similar affection of the mitral valve produces no special signs, as the valve is already incompetent by reason of myocardial weakness. The systolic murmur is myocardial, and not endocardial in its origin.

The malignant type of rheumatic endocarditis was not represented among my cases. Figures bearing on its frequency will be found in the writings of Osler<sup>1</sup> and Glynn.<sup>2</sup>

The recurrent and cicatricial stages of rheumatic endocarditis make themselves apparent only by the disablement of the valves which they produce. For all practical purposes we may consider aortic incompetence and mitral obstruction as the two perversions of the valvular functions resulting from such disablement; and neither of these conditions is common, in well-developed form, in childhood. A presystolic murmur and thrill do not necessarily mean mitral stenosis in rheumatic children. *Post-mortem*, the valves are usually found to show evidence of early fibrosis, but the condition is quite unworthy to be classed as "stenosis." It is not surprising, therefore, that in none of my cases was an unmistakable stenosis present. No doubt many of them will

<sup>1</sup> Goulstonian Lectures, 1885.

<sup>2</sup> Lumleian Lectures, 1903.

show it in later years; but it had not had time to develop at 16.

Aortic incompetence was present in thirteen out of my sixty-five cases, but this must not be taken to indicate a preponderance of aortic over mitral lesions as the effect of rheumatism. It simply means that the aortic valves are easily and quickly rendered incompetent, while it needs a good deal of fibrosis to obstruct the mitral orifice. As a matter of fact, rheumatism attacks the mitral valves nearly three times as often as the aortic (Poynton), a figure supported by some observations of my own. Of 155 cases of valvular disease examined by me at St. Mary's Hospital, there were 99 purely mitral cases, 34 purely aortic; of the former 82 per cent. gave a history of acute rheumatism, of the latter 35 per cent. only. The remainder were cases of combined aortic and mitral disease, of whom 77 per cent. gave a similar history.

There is no space here for a discussion of the prognosis or of the lines of treatment. The object of the paper is to show that for the production of those signs which are met with in the great majority of cases of rheumatic carditis in childhood it is quite unnecessary to blame the valves or the pericardium; the myocardial changes which are always present are enough to account for everything. There are, however, modifications of the fundamental clinical picture due to special types of inflammatory change in the serous layers. Of these the commonest are aortic incompetence and recurrent pericarditis, which, I may add, not infrequently coincide in the same patient.

# TREATMENT OF GRAVES'S DISEASE BY ANTI- THYROID SERUM AND BY X-RAYS.<sup>1</sup>

BY

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It may be well, before passing to the subject of treatment, to recall briefly the chief theories as to the nature of Graves's disease. Unfortunately the pathology of this affection is still very obscure, and the exact way in which it is produced uncertain.

Undoubtedly many of the most striking symptoms are brought about through the medium of the sympathetic, but there is no evidence that the disease originates in an affection of the sympathetic; and similarly, though the three cardinal symptoms have been produced by experimental lesion of the restiform bodies, and though there is even a stronger point in favour of the theory which would attribute the disease to a lesion of the medulla oblongata, namely that morbid changes are fairly constantly found there, there is no sufficient proof that these lesions cause Graves's disease or are more than secondary ones. The theory that it is due to hypersecretion of the thyroid has perhaps more to support it. Myxœdema is in some respects the antithesis of Graves's disease, and we know that the former depends on an absence of the thyroid secretion. Again, much has been made of the resemblance between the symptoms of Graves's disease and those produced by an overdose of thyroid extract; but though there is a certain analogy between the two conditions, it must be objected that no one has ever yet succeeded in producing the full clinical picture of Graves's disease by administering thyroid extract.

It was on the supposition that the disease depended on a

<sup>1</sup> Read at a meeting of the Bristol Medico-Chirurgical Society held at Weston-super-Mare on June 12th, 1907.

hypersecretion by the thyroid that Möbius advised the use of serum from thyroidectomised goats. He supposed that in the serum of such animals there would accumulate an excess of antibodies (to the thyroid), and that these, when ingested by the patient suffering from Graves's disease, would neutralise the excess of thyroid secretion in them.

Numerous observers have published good results obtained from the use of such sera. The serum was at first injected, but was afterwards found to be equally efficacious by the mouth. Good results have also been alleged from the use of Rodagen—the milk of thyroidectomised goats—given in the form of tablets.

I give my experience of the use of these remedies below. Of the new serum prepared by Rogers and Beebe I have had no experience; their method is also founded on the thyroid hypersecretion theory of Graves's disease, but based on a different principle. They first endeavoured to find out how the thyroid secretion in this disease differs from that in health, obviously a most important point, and one not satisfactorily settled. As a result of an extensive investigation, Oswald says that the only difference between the two is that the thyroid secretion in Graves's disease contains less iodine. The objects at which Rogers and Beebe aimed are (1) to neutralise toxic substances, and (2) to stop their production in quantity. From the nucleo-proteids of certain organs they prepared a serum which had a specific cytolytic effect on these organs, by inoculating rabbits (1) with nucleo-proteids and thyroglobulins from the thyroid glands of fatal cases of Graves's disease, and (2) with the same substances from normal thyroids. After a definite number of injections, the activity of the serum of these animals was determined by an agglutinin test and injections made into patients with Graves's disease. They claim that of the cases thus treated 11 were cured, 43 improved, and 15 were unaffected.

I have treated three well-marked cases of exophthalmic goitre with Rodagen; the patients improved—but I think not more than most cases improve by rest in hospital—and I was not able to trace any distinct effect from the remedy. I give the details of one case.

**Case 1.**—Rosina H., æt. 26. Duration of thyroid swelling, tachycardia, and tremor with general weakness, &c., nine years. Exophthalmos first appeared eighteen months previous to admission. Her condition has varied from time to time, being sometimes better, sometimes worse; after each of her two confinements she was decidedly worse. On admission she had marked exophthalmos, pulsating goitre and tremor; pulse-rate 140. The heart was slightly enlarged, and there was a systolic apex murmur. For the first week, under ordinary treatment by rest, phosphate of soda and glycerophosphates, the patient felt better, and the pulse-rate was from 118—130. From November 29th to December 12th Rodagen was given in half-drachm doses three times a day. The pulse varied from 118—130; the neck measurement remained the same. The patient declared herself to be feeling decidedly improved, and there was obviously a general improvement in her condition. From December 12th to 20th Rodagen was stopped without making any apparent difference, and was given again from December 20th to January 23rd. The pulse-rate remained the same, proptosis and thyroid enlargement unaltered, heart's action less excited. There was less tremor, and she said the palpitation was less. As a result of the seven weeks' treatment she gained 8 lb. in weight. Subsequently this patient was treated with Möbius's antithyroid serum, in a dose of 5 cc. daily for about three weeks. The patient continued to show improvement on her state on admission. The tremor became decidedly less, and the pulse-rate 112—120. No other objective sign of improvement was noted, but she stated that she felt very much better.

The following cases were treated with antithyroid serum (Möbius):—

**Case 2.**—Louisa B., æt. 36, married. Never good health. Duration of illness, two years. Goitre, palpitation, exophthalmos, tremor. No cardiac enlargement, no apex murmur. Dyspepsia and vomiting, throbbing of vessels. Admitted March 15th, 1907. Pulse-rate 140 on admission; this with rest dropped to 106 in six days. Neck measured thirteen inches in circumference. March 21st: Antithyroid serum 5 cc. every other day, and bismuth mixture for indigestion. On April 3rd condition much the same, but pulse-rate 96. She said her neck felt smaller, and it was one inch less on measurement. April 9th, pulse 120. As she said she did not feel so well, and that the heart beat faster after taking the serum, the pulse-rate was taken every hour for eight hours after the dose. It was found that no essential difference could be made out in the pulse-rate after the dose from that on the days that she did not take the serum. The only change was, that on the average the pulse-rate on four occasions was



about 10 beats to the minute slower for some hours after the serum, viz. 112—114 instead of 124. On April 17th pulse-rate was 112, perspirations were less profuse, tremors same, general condition was improved. Five cc. antithyreoid serum had been taken every other day from March 21st to April 3rd; 10 cc. from April 3rd to April 18th. The following estimations were made of the nitrogen in the food and urine; that in the fæces was not determined; the bowels were moved regularly once a day, and there was no diarrhœa. On April 17th 10 cc. serum were given, and she had been taking it since March 21st. Her weight was 45 kilos. The food taken on this day contained 1,800 calories; the nitrogen in the food was 147.5 grains, and nitrogen excreted in urine 126.7 (as urea and in purin bodies separately estimated). On a later day, when no serum had been taken for three days, she took a larger amount of food—over 2,300 calories—and the nitrogen ingested and excreted, estimated in the same way, was respectively 176 and 140 grains.

**Case 3.**—Margaret E., æt. 18. This patient was in the Hospital in the autumn of 1906 with hysterical mutism, anorexia nervosa, tachycardia, tremor and exophthalmos. She was profoundly emaciated, weighing 5 st. 10 lb., whilst her height was 5 ft. 10 in. Under Weir-Mitchell treatment, her weight went up to 8 st. 9 lb. She left the Hospital after three months with a pulse of 140. There was then no thyroid swelling, but this appeared shortly afterwards. Readmitted March 28th, 1907, she was well nourished, with marked exophthalmos, pulsating goître, tremor, profuse sweats, and loss of power in the legs. Pulse-rate, 140; heart slightly enlarged, with a loud systolic murmur all over the præcordia. She was ordered antithyreoid serum in dose of 5 cc. every other day. After a week this dose was given daily, and then she took 10 cc. every other day for another week, and during the fourth week 10 cc. every day. Duration of treatment, April 1st to 28th inclusive. No appreciable effect was noticed during the time the serum was administered. On April 1st, on beginning treatment, pulse-rate was 144; on April 7th it was 140; on 17th it dropped to 112; but on April 24th was 150, and on May 15th was 150; on June 5th, 135. The respiration was 30. Sweats remained undiminished; exophthalmos same. The goître—a large one, circumference of neck being fifteen inches—was unaltered; tremor perhaps less. On the other hand, she expressed herself as feeling better and stronger, and suffering less from palpitation; she slept better, and her appetite improved. The quantity of urine averaged 44—45 oz. per diem at the commencement of the serum treatment; dropped to about 30 oz. per diem at the end of it, and for three weeks afterwards. This patient was paraplegic; the paraplegia, which presented some of the features of hysterical paraplegia in the absence of muscular wasting, of

alteration of the reflexes, of dulling of sensation to pain (pin-prick) and of the muscular sense, did not improve under serum treatment. The patient developed a very large appetite; her weight was 9 stone. On April 17th, 18th, the amount of food taken was as follows:—

|   | 17th.         | 18th.         |
|---|---------------|---------------|
| Nitrogen in food . . . .                                | 204.2 grains. | 197.6 grains. |
| Nitrogen excreted in urine<br>(urea and purin bodies) . | 206.7 „       | 211.5 „       |

The nitrogen in the fæces was not estimated; there was one daily action of the bowels, so that apparently there was some loss of nitrogen during the time the serum was taken. On May 5th, about a week after serum had been discontinued:

|                                    |             |
|------------------------------------|-------------|
| Total nitrogen in food . . . .     | 223 grains. |
| Nitrogen excreted in urine . . . . | 212 „       |

**Case 4.**—Gladys J., 19 years. First symptoms: goître, exophthalmos, palpitation, appeared six to seven months previous to admission. On admission there were a large pulsating goître with thrill, a moderate degree of exophthalmos, a marked tremor, and tachycardia. Pulse 132, no enlargement of heart, a systolic pulmonary but no apex murmur, and anæmia. Under six weeks' treatment by rest, constant current to neck, strophanthus, belladonna and iron, little or no improvement took place. Pulse-rate averaged 140. From September 14th to 28th she was given antithyreoid serum 5 cc. every other day, all other treatment being stopped. At the end of this time there was slight improvement, consisting of less pulsation in the thyroid, with a diminution in the circumference of the neck from fourteen to thirteen inches, less tremor, and a pulse-rate of 130—124. In other respects the condition was unchanged, and she left the Hospital at her own request a week later without any very material change in her state.

**Case 5.**—Lily T., æt. 26. Symptoms attributed to a fall in August, 1905, when she struck her head, and was in bad health for some time afterwards. Tachycardia, exophthalmos and goître appeared November, 1905. On admission, April, 1906: pulse 110, no cardiac enlargement or murmur, marked tremor, slight exophthalmos, and small goître, chiefly of right lateral lobe of thyroid. She suffered from constant profuse perspirations. Blood pressure, 120 mm. Hg. From April 5th to 30th, 1906, she was treated by rest in bed, by antithyreoid serum, 3i, given twice daily; and, as she slept badly, an occasional dose of Veronal at night. This was a mild case. She certainly improved under treatment; the pulse-rate fell to 88—98, the blood pressure to 105 mm. Hg. There was less tremor, less exophthalmos; her general condition improved; she became less nervous, and

recovered her sleep. On the other hand, the profuse perspirations were unchanged. She gained a few pounds in weight. After April 30th the antithyroid serum was stopped, and she was given belladonna, with application of a constant current to the neck. There was no material change in her state, the improvement being maintained, but she varied from day to day, having bad days, in which the palpitation was again severe.

In the following cases treatment was by X-rays :—

Case 5 remained in much the same state until August, 1906. From August 11th to November 10th she was treated by X-rays, attending as an out-patient three to four times a week for that purpose. The X-rays were applied over the thyroid gland for ten minutes at each sitting, thirty-four sittings in all. No distinct effect was observed from this course of treatment, except that there was some diminution in the size of the goitre.

**Case 6.**—Ida N., æt. 27, was treated by X-rays. Admitted July 31st, 1906. She had had no previous illness, except rheumatic fever two years ago. The present illness began three years ago with a pulsating goitre, palpitation and tachycardia. This attack lasted six weeks, and was relieved by rest at a convalescent home. Symptoms returned March, 1906, and continued until admission. On examination there were a large pulsating goitre, marked tremor, slight exophthalmos, pulse-rate 108, pigmentation of upper eyelids, and a systolic murmur at apex. From August 4th to September 19th she was treated by application of X-rays to the thyroid on four days a week, for ten minutes at each sitting. At the end of this time the neck measured about the same, pulse-rate 112, pulsation in vessels same, tremor decidedly less. She had lost 4 lb. in weight. She said herself that she felt better. The X-rays were then omitted for a week without any material change in her condition, except that she gained 2 lb. in weight. Treatment by X-rays was resumed on September 26th, and continued until November 10th; during this time she was an out-patient. She gained weight slowly but steadily during this period, gaining 6 lb. in all. Her pulse remained at 108, the tremor was still present but less. Sleep was good, and she had a good appetite, but suffered from dyspepsia. On the whole, slight general improvement.

**Case 7.**—Nellie B., æt. 23. Illness stated to have begun six months previously. She had taken thyroid extract for psoriasis. On examination there was left-sided exophthalmos, slight left ptosis, a large pulsating goitre, pulse-rate 125—130, marked tremor, profuse sweats and general nervousness. Treatment with X-rays was carried out in the same way as in the other patients, forty-three sittings being given in all between August 10th and

November 3rd, 1906. In this case the pulse-rate fell to an average of 116 in October and to 98—100 in November, the goitre became smaller, the tremor and sweats less, and the patient felt generally better.

Of another case treated by the X-rays for six weeks I need not give the details, as although a diminution in the size of the thyroid, and a temporary fall in the pulse-rate occurred, except for the former, there was no permanent alteration in the patient's state as a result of treatment.

There is great difficulty in estimating at its true value any mode of treatment of Graves's disease. The malady is not a fatal one; in a case of average severity it may not materially shorten life. It is not steadily progressive; remarkable ameliorations occur in the natural course of the illness, and these remissions may last a long time. Further, most of the symptoms are directly produced by functional disorders of the nervous system. For many of these we have to depend on the statements and on the subjective feelings of the patient; and even of those which can be objectively observed, some are of such a nature as to be influenced by nervous states. The symptoms generally are easily affected by changes, for good or bad, in the general conditions of life. In hospital in-patient practice the effect of treatment is particularly difficult to judge, for the improved conditions arising from good food, rest, freedom from harassing family cares, well-ventilated wards, and general care to maintain the bodily functions in good order, nearly always result in considerable improvement in the patient's health, and are just those best adapted to counteract the disabilities of the disease.

On looking over notes of old cases treated simply by rest, a full diet, tonics, belladonna, and electricity to the thyroid gland, I find that in nearly every case the patient went out better. This statement must be modified to the extent that no patient left the Hospital cured. Goitre, exophthalmos, pulse-rate, tremor, sweats, might all be less, but still remained to some extent. Thus I do not find a pulse-rate below 90. The symptoms most completely relieved were "nervousness," tremor, palpitation or subjective sense of pulsation in vessels, sweatings, and sense of

suffocation or difficulty of breathing from enlarged thyroid, and together with this relief a general increase of strength and of well-being.

Compared with the ordinary results of hospital treatment, I did not find any striking advantage from the use of antithyroid serum, though it must be said that the patients certainly declare themselves as feeling much better, more than they usually do under ordinary treatment. So far as I am aware, they did not know that they were taking a new remedy. There was no especial point to notice, except that in two of the cases, so far as observations went, there was an increase of nitrogenous excretion by the urine, and in one the quantity of urine passed was decreased. The expense of the serum is a decided disadvantage.

With regard to the X-rays, more experience is required; as the patients were out-patients, the treatment by X-rays was the only change from their ordinary condition. In one case, which was anomalous in its alleged mode of origin, their use appeared to be attended with marked and permanent benefit. The others "felt better," and there was a slight diminution in pulse-rate during treatment, which was not, however, permanent. In one respect I think the X-rays may be of advantage, and that is in diminishing the size of the goitre; this diminution was permanent in three cases, and with it the patients lost the feeling of suffocation, of which they had occasionally complained. In one patient there were marked fluctuations in weight; but though weight was lost during a first course of X-rays, it was gained during a second. Such fluctuations also occur, with remissions, in the natural course of the disease.

It may be added that in each case the urine was normal, and that, from what is now known of treatment by X-rays, it would probably be inadvisable to use them in any case where the kidneys were not sound.

I am much indebted to my collèague, Dr. W. K. Wills, for the care with which he carried out this part of the treatment.

# CEREBRAL LESIONS IN PREGNANCY AND PARTURITION.

BY

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ORGANIC cerebral lesions may occur in the course of pregnancy and parturition with the same relative frequency as in the absence of these conditions, but their coincidence may, under certain circumstances, give rise to considerable difficulties in diagnosis.

In addition to symptoms due to organic lesions of the brain and cord, several forms of neurosis may occur which simulate them in a greater or less degree, and give rise to difficulties in diagnosis and treatment which may lead to mistakes, both in treatment and prognosis, of a character by no means trivial.

The position is also complicated by the fact that various functional neuroses, with symptoms superficially resembling those of organic cerebral lesions, are liable to occur during both pregnancy and the puerperal state, *e.g.* affections of speech, apparent loss or impairment of vision, affections of hearing and parietic conditions are met with not infrequently; while inflammatory cerebral lesions, with their accompanying symptoms in the puerperium, will almost certainly be attributed in the first instance to uterine sepsis, with which, it must be stated, there is occasionally a definite causal connection. Paralyses of the lower limbs alone are not infrequent, owing to the liability of the nerve tissues in the pelvis to mechanical pressure; these may be attributed to lesions of the cord, and it is not unknown for cases superficially or even intimately resembling, *e.g.*, spastic paraplegia to arise, or at any rate to display their first symptoms after parturition. The writer has quite recently met with a case of this kind, in which paraplegic symptoms with spastic phenomena supervened on a

difficult labour, but proved on careful investigation not to be due to a definite descending spinal lesion, the symptoms of which they much resembled.

Such cases as this do not come within the purview of this paper, which is concerned more especially with cases in which the symptoms indicated an organic cerebral lesion.

**Case 1.**—A multipara, æt. 37, was delivered by a midwife, who summoned the writer on the day following delivery because the patient was paralysed. I found her to be suffering from marked right-sided hemiplegia, with interference with speech. She was quite unable to articulate distinctly; although she would make attempts to pronounce the words she wished to use, she could not do so in such a way as to make them recognisable. Some facial paralysis was present. The whole condition cleared up in about ten days, the paralysis passing off and her power of articulation returning. The lesion was regarded as being due to a thrombosis of the left middle cerebral artery or one of its branches.

**Case 2.**—A multipara, æt. 22, was delivered on the 27th of January, 1901, labour being normal in every respect. Two days later, during which time she had suffered from severe headache and rise of temperature, which was attributed to septic infection, and for which her uterus was washed out, she became comatose, and died very shortly afterwards. An autopsy was made, and to the surprise of everyone concerned pus was found over the whole upper surface of the cerebral hemispheres and anterior third of the cerebellum; also between the lobes of the cerebellum and along the whole length of the cord. Numerous cocci were found in the pus, including a diplococcus which stained feebly with Gram. The cause of death was obviously suppurative cerebro-spinal meningitis.

**Case 3.**—A patient who was at about the end of the seventh month of pregnancy was admitted into the Bristol Royal Infirmary in a state of coma. She had some slight convulsive movements, her urine was albuminous, temperature 102° F., pulse 110, and respirations 50; a little later her temperature was 103° F., pulse 110, and respirations 72, the coma increasing. She was wet-cupped at once, and the usual remedies for eclampsia used in the interval between her admission and my seeing her. On seeing her, I expressed a doubt as to her suffering from eclampsia, and hazarded the suggestion that she was in reality suffering from an inflammatory cerebral lesion, possibly meningitis; but of this there were no definite symptoms, except that her general aspect and the character of the convulsive movements reminded me of

the appearance of children suffering from meningitis. She delivered herself twenty hours later of a premature stillborn child, and died four hours later. *Post-mortem*: Suppurative meningitis of the brain and cord was found. The pus contained numerous staphylococci, and in addition a diplococcus resembling Fraenkel's.

**Case 4.**—A multipara, aged about 40, was admitted in a state of coma, with convulsive movements and albuminous urine, as suffering from eclampsia. She was in the ninth month of pregnancy, and was delivered by *accouchment forcée* but died within two hours of delivery. *Post-mortem*: There was found at the upper part of the right temporal lobe a cyst filled with fluid as big as the fist, and a second cyst of less size was found in the lower right frontal lobe. The kidneys were granular.

**Case 5.**—A multipara, aged 28, on the tenth day after delivery developed a temperature of 103° F., after a convulsive seizure, which was chiefly marked on the left side; her temperature gradually rose, and she rapidly became comatose, but no more fits occurred. When I saw her there was an occasional tremor of the left arm and leg, associated with marked rigidity of these limbs, deviation of the eyes to the right, and some facial paralysis. She had suffered from a discharge from the right ear. She died about eight hours later, and no autopsy was made. This was probably a case of cerebral abscess with rupture following on middle ear disease.

From a practical point of view, the importance of these cases resolves itself into considerations of diagnosis and prognosis, since in the last case only could treatment have had any marked effect. In Case 1 there was no great difficulty, except that either the hemiplegia, affection of speech, or facial paralysis might, if they had existed alone, been possibly functional.

The presence of these three conditions simultaneously, however, appeared to me to indicate a gross cerebral lesion, while the comparatively rapid recovery and the fact that the paralyzes and affection of speech were not absolute seemed to me to point to a thrombosis rather than an embolus or hemorrhage.

In Case 2 the only clue to the real source of the symptoms lay in the acute headache and ingravescent coma, with high fever.

In such a case one's first thought would be naturally that uterine sepsis was the cause, the only possibility of excluding



which would be to prove that the uterus was germ-free by culture. Cerebro-spinal meningitis was never dreamt of as a possible cause of the symptoms, or a lumbar puncture would in all probability have cleared up the diagnosis. One point in connection with this case is worth recording : in the majority of cases in which suppurative cerebro-spinal meningitis has been found as a complication of the puerperium uterine sepsis has been present.

This, after all, is not surprising ; but the rapid death in this case almost precludes that possibility, while at the autopsy no focus of septic infection was found. There is no record as to whether a culture was taken from the uterine cavity.

The infection must almost certainly have been present at the time of delivery, as the patient was complaining of headache then.

In the third case a quite justifiable diagnosis of eclampsia was made. I did not agree with this, in spite of the albuminous urine, because the so-called fits in no way resembled eclamptic seizures as I have seen them, and, moreover, in eclampsia a markedly febrile temperature does not as a rule occur except after several fits, and when it does is of very grave prognostic import.

The rapid respirations rather suggested pneumonia, but no physical signs could be found.

None of the usual symptoms attributed to meningitis were present in any noticeable degree, and I greatly regret that, having hazarded the suggestion that cerebro-spinal meningitis was the cause of the trouble, I did not at once proceed to verify this by lumbar puncture.

In Case 4 the fits were probably eclamptic, and the cysts present simply a coincidence.

In Case 5 the febrile temperature, increasing coma, left-sided spasm and rigidity rather indicated the presence of a localised cerebral inflammatory process than an attack of eclampsia, which was the provisional primary diagnosis. In this case possibly surgical intervention might have succeeded had her condition been such as to call the attention of her medical attendant or to alarm her friends earlier. As it was, her own attendant was not sent for until she was obviously very ill, and when I saw her she was moribund.

*Prognosis.*—In any case similar to those mentioned above prognosis cannot be too guarded if a gross cerebral lesion is probable, and especially if it appears to be of an inflammatory origin. Whether in connection with pregnancy or not, this may be looked upon as the rule.

A mistake in diagnosis is quite likely, and in the majority of such cases quite pardonable, even with a practitioner of experience. In the cases of meningitis it is extremely doubtful if an accurate diagnosis would have been of the least value.

It is barely possible that the injection of an antiseptic through the lumbar puncture might have some effect ; in any case it could hardly hasten the certain fatal event ; or it is again possible that injection of a polyvalent serum might prove of some use, or at any rate of little harm. The rapid fatality of the affection gives but little time for anything of the kind, however, and in these cases one important point is to be remembered—that whatever is to be done should be carefully and clearly explained to the friends, who are particularly prone to misinterpret unsuccessful efforts in these cases, and who are most obstinate and unreasonable in sticking to their own opinion as to the cause of death.

As an example of this, I may mention a case of which I have known, in which the patient dying of cerebral hemorrhage shortly after a confinement, in which she was given chloroform while forceps were used, the anæsthetic has always been spoken of by the friends as the cause of death, and the reputation of its administrator made to suffer accordingly.

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## A SUGGESTED TREATMENT FOR FUNCTIONAL APHONIA.<sup>1</sup>

BY

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THE treatment of functional aphonia has always struck me as being unsatisfactory.

In the majority of cases, of course, the voice can, so to speak, be frightened back. The introduction of a mysterious instrument, as the laryngoscopic mirror must appear to the uneducated mind, in many cases serves the purpose. In other cases the more severe treatment by the interrupted current effects a cure, but a small minority of patients fail to benefit by any of the usual methods, and often pass into a state of voicelessness which persists for years, and often for life.

Now the frightening of the voice back always seems to me on a par with frightening children into good behaviour; it is uncertain in its effect, and relapse is common. It is only systematic treatment on definite lines which can be depended upon for any permanent effect, either in the case of a naughty child or the ill-behaving vocal cords; and I venture to think that the treatment I now advocate is based upon sound principles, and can be successfully carried out by any medical man.

I have adopted it myself with success for the last four or five years, and so far as I can ascertain it is a method which has not hitherto been described for the cure of functional aphonia. Should I, however, be mistaken in my assumption, I must apologise for having inadvertently trespassed upon someone's preserves.

Before illustrating by specific cases, I would premise by saying that the treatment is based upon the fact that in almost every case there is some sort of a sound which can be produced by the approxi-

<sup>1</sup> Read at a Meeting of the Bristol Medico-Chirurgical Society at Weston-super-Mare, on June 12th, 1907.

mation of the vocal cords, and this note has, so to speak, to be caught and educated. As a rule, it is a very high-pitched note—C or D above—of the very feeblest quality, often not louder than a mouse's squeak, and inaudible at a few feet away. It requires great patience on the part of the doctor to catch and educate it.

In most cases the sound is more easily made with mouth almost or quite shut. As the voice strengthens, the patients can gradually open the mouth more and more, but any attempt to make them start with a big, round mouth—as a singing master would advise his pupils to do—is useless, and they themselves, as a rule, choose to keep the lips fairly close together. Although the first sound produced is usually very high-pitched, in one patient the only sound I could elicit was a low-pitched grunt—about F below middle C; this is unusual, I believe. It is very desirable to ascertain on the piano the note the patient first pitches on, either as a squeak or as a grunt, and to record this note in a book, so as to start on the same note the next lesson.

Sometimes it is not easy to make out what note a grunt is, but you can get pretty close to it, and after a few trials the patient will attune her voice to the note you have decided on as being nearest to her first attempt. It is well to remember that it is easier to "hum" than it is to pronounce a definite vowel sound, as "o" or "e." At the first interview you strike middle C on the piano, telling the patient to try to sing or "hum" to it. You then strike D, E, F, G, A, B, C in quick succession. As a rule, with the lower notes no sound beyond a gasp or whisper is heard, but when upper B or C is reached the patient usually gives a momentary faint squeak, which, if prolonged, relapses at once into a whisper. At the first interview you must be contented with this momentary feeble squeak. On the following day start at once on the note the patient succeeded in producing the day before—say C above—at first, as yesterday, being satisfied with a succession of short, sharp, falsetto sounds, with intervals of rest between. After practising the interrupted sounds for a few minutes, it is well to hold the note on the piano down for a brief space, telling the patient to continue to squeak as long as it is held down. At first the sound is very tremulous, but by the end of the lesson, which

lasts about ten minutes, it has usually become firmer, somewhat like a miniature siren. If it does not become firm, go back for a time to the interrupted squeaks. When the voice has thoroughly grasped the siren or humming sound, and can sustain it without breaking for a few seconds at a time, the vowel sound "o" should be attempted, and as soon as that has been accomplished a word, *e.g.* Do of the Do, Re, Mi should be learnt and sung on the same note. When the "Do" is first attempted it often results in failure, the voice breaking into a whisper again. Should that be the case, let the patient pronounce it as two words, De (short) O; she will then whisper the first part, De, and sing the O, and after a few trials will arrive at Do as one word. By this time she will, as a rule, be able to take a lower note and a higher one, and to sing the words Do, Re, Mi up and down on these three notes till they are sung firmly and fairly loudly. If there is any difficulty let her repeat the Do up and down, and soon the words Re and Mi are learnt, as the voice strengthens and she gains confidence. If the patient has anything of a voice the scale can soon be managed, and after that, or before, if the patient is not a singer, words can be intoned, and in reply to your questions the answers must be intoned, so that the patient gradually learns to use a large number of different words. After that she can try a simple song, as "Three Blind Mice," repeating the same sentence several times running, and then pass on to intoning on a few notes any piece of reading you choose. When she can sing or intone easily anything you give her, it is time to start speaking, and after practising the singing voice for a few minutes tell her to read instead of singing, starting with a simple sentence and repeating it very slowly after you. If there is any hesitation, let her at once go back to the singing, and try again. It may require two or three attempts. After that she can practise reading aloud regularly at home, but should always keep the voice in working order by daily singing.

This is an outline of the treatment, which can be modified as occasion demands. It is very desirable while you are carrying out this treatment in a severe case to isolate the patient, particularly if she happens to be living in the bosom of a large and

sympathetic family. If possible, let her stay with a nurse or any sensible woman who will carry out your instructions conscientiously. Strict orders should be given that she must not whisper at all, but after she has learnt to intone permission may be given to use her voice in conversation by intoning.

After the first two or three lessons, when she can sing Do, Re, Mi, it is a good plan for her to practise these first three notes twice or thrice a day for ten minutes at a time at the piano, her companion striking the notes and insisting on their being sounded firmly and steadily.

In the most severe case I had it took ten or eleven days before she could speak at all vigorously. In mild cases two or three visits may often suffice to restore the voice.

I will now illustrate by two cases, which I have taken as bad ones.

**Case 1.**—A French lady, a teacher, about 23 years of age, came to me on April 30th, 1902. She had lost her voice sixteen months ago, and had been treated at a throat hospital in town by electricity, &c. She had naturally a very weak voice, and had never sung. The only note she could produce was a high squeak on C above middle C, and B next below not so well. Both these notes were of the feeblest quality, barely audible a few feet away. On attempting notes above or below B or C the voice at once became a whisper. Three or four days later she succeeded in producing upper B, C, D fairly strongly, and also A and G very tremulously. I bade her practise these five notes—G, A, B, C, D—thrice daily, and enjoined on her the necessity of not trying to speak at all, but of asking for what she wanted in a sing-song on upper C. Three days after that she sang fairly clearly from G up to D, and at the same lesson spoke in a feeble voice. From that date she improved rapidly.

**Case 2.**—A young lady, age 19 years, came to see me June 18th 1904. She had lost her voice six months ago. She was very strong physically, and clever. Had had treatment, including electric battery, without benefit. Could only speak in a whisper. At the first interview the only sound I could elicit, after over a quarter of an hour's trial, was a very feeble, low-pitched grunt, about F below middle C, barely audible. No note in the nature of a high-pitched falsetto note could be produced at this visit. Three days later, on again making the grunt, the voice broke on to a momentary falsetto squeak, just audible, on E above upper C. On the following day she started at once on E above, and soon

produced all the notes by humming from upper C down to middle C, but broke down at once into a whisper when told to sing Do. By pronouncing the Do as two words—De—O—she soon succeeded in singing it as one word. The next day she sang the octave, and in answer to various simple questions intoned the replies. On June 26th, eight days after her first visit, after singing the octave and various sentences clearly for a short time, she succeeded, with some difficulty, in speaking a simple sentence, repeating the words after me very slowly. From this time the voice got rapidly stronger, and I advised her to practise singing every day to keep the voice strong.

These two cases I have chosen as they had both been treated by experts in throats, and the battery had been applied in both cases without success.

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A CASE OF FILARIASIS :  
REMOVAL OF LYMPHATIC VARIX BY OPERATION.

BY

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IN October, 1906, a negro, aged 19, was admitted to the Royal Infirmary under Dr. Nixon on account of elephantiasis. His home had been in Demerara, where his parents, two brothers and four sisters are still living and healthy ; one brother has died from "diarrhœa." Previous to leaving Demerara he had suffered from occasional attacks of fever, but during the last five years these had been absent. He came to England two-and-a-half years ago, and has followed many occupations—ship's steward, professional boxer, and motor-car cleaner. About six months after his arrival two abscesses appeared on his right leg ; they burst and healed spontaneously without further trouble.

About seven months before he came under our observation, a swelling in the left groin began to trouble him—not by pain, merely by the discomfort of its presence ; its growth was slow but steady. A month after the swelling appeared in the groin he noticed that the left leg as a whole was increasing in size quite

painlessly ; he was also struck by the fact that both the general fulness of the leg and the localised tumour in the groin increased on standing and decreased after resting. On one occasion he intentionally pricked the leg with a needle, and a milky fluid escaped, but the puncture healed in a few days.

*On admission* the patient presented all the appearances of vigorous health and considerable physical development. The heart and lungs showed nothing abnormal. The pulse rate was 88, respirations 24, and the temperature was 97° F. His abdomen was soft, flaccid, and not distended ; the liver and spleen were not enlarged. In the left groin, filling Scarpa's triangle and apparently outlined by it, was an elastic, irregularly-lobulated swelling neither painful nor tender ; above it was very definitely limited by Poupart's ligament. At first sight, and to the touch, it represented a soft lipoma, but there was a marked impulse on coughing. It had an ill-defined feeling of fluctuation, and by pressure on one half could be almost completely made to disappear in the part under compression, with a corresponding increase of fulness in the other part ; it felt, in fact, like a wet sponge in an india-rubber bag. When the patient lay down for a short while the tumour became obviously smaller, and then irregular knotted cords could be felt traversing its substance ; firm pressure on the abdomen just above Poupart's ligament conveyed the impression of a similar fulness in the pelvis on that side, which was absent on the right ; no enlarged glands could be made out. The thigh was not much increased in size, but below the knee there was considerable œdema, with the characteristic hardness and ruggedness of the skin which is associated with elephantiasis. At the middle of the calf the girth of the left leg was four inches greater than the right ; the skin was not broken or inflamed. There was no sign of lymph scrotum, or of any varicosity of lymphatics in other regions.

On the night subsequent to that of his admission the patient had a rigor, and his temperature rose to 102° ; the attack was by no means a complete or definite "ague-fit," and never recurred at any time. The temperature remained constantly normal afterwards.

Mr. Rudge, our house physician, examined the blood, and found the *filaria sanguinis hominis* present at nights ; the results of his investigations are appended to this report in their entirety. The swelling in the groin was explored shortly after admission with a hypodermic syringe ; no fluid entered the syringe, but on withdrawing the needle, a drop of milky fluid appeared at the seat of puncture ; by pressure a considerable amount of chylus fluid was procured, but on examination no filariæ were found (the time of puncturing was 3 p.m.). Rest in bed and the application of pressure made no material difference to the condition of the leg.



It was then represented to the patient that an operation for the removal of the tumour might be successfully undertaken, but that the cure of his elephantiasis or the discovery of the parent worm or worms (in whose life history he took a keen interest) were improbable, the chylous nature of the fluid making it unlikely that the actual point of obstruction was low enough down to be accessible. Understanding the circumstances, he decided that he would have the operation performed after Christmas, and returned home for a month.

On January 16th, 1907, Mr. Bush operated for the removal of the lymphatic varix. Turning up a large triangular flap of skin in the groin, he exposed the mass, ligatured the larger lymphatics above and below as they entered the varicose plexus, divided the internal saphena vein which was buried in the mass, and then cut through its remaining attachments, excepting an extension of the plexus which was found to pass through the saphenous opening, communicating probably with similarly dilated lymphatics more deeply situated. This was ligatured and divided, the varix when removed being about large enough to fill a soup plate (the lymph contained in its spaces having for the most part escaped); no trace of the parent worm was found in it.

So far as was possible all oozing points in the area laid open were ligatured before closing the wound, and a drainage tube was inserted. No attempt was made to follow the lymphatics into the pelvis and remove them from that situation, into which they obviously extended.

The patient made an uneventful recovery, and left the Infirmary a month after the operation; the wound was not completely healed, and there was still a slight leaking of lymph. The general swelling of the leg was somewhat less, and the patient expressed himself as much more comfortable since the lump in his groin had been removed. As he no longer resides in Bristol, we are not aware whether the discharge of lymph has stopped and the wound healed.

The appearance of the filaria in the blood was in no way affected by the operation; the embryos were found at the usual time during the night in undiminished numbers from the date of operation to the time of discharge.

Since the publication of Cunningham's monograph (with its extensive bibliography)<sup>1</sup> it seems of great importance that cases of filariasis which are submitted to surgical treatment should be reported in full, so that evidence may be amassed upon which sound conclusions may ultimately be based. For at present, if surgery fails to relieve the subjects of filariasis, they lie indeed under no obligation to "internal medicine."

<sup>1</sup> *Ann. Surg.*, 1906, xliv. 481.

## BLOOD REPORT BY F. H. RUDGE, M.R.C.S., L.R.C.P.

The examination of the blood of this patient has not demonstrated any new facts as to the characteristics or life-history of the *filaria nocturna* embryo. The presence or absence of the embryo in the peripheral blood taken at various times during the day and night is indicated in the appended table :

|             |             |         |              |
|-------------|-------------|---------|--------------|
| 12 midnight | numerous.   | 12 noon | .. none.     |
| 2 a.m.      | .. present. | 4 p.m.  | .. none.     |
| 4 a.m.      | .. present. | 6 p.m.  | .. none.     |
| 5 a.m.      | .. present. | 7 p.m.  | .. none.     |
| 6 a.m.      | .. few.     | 8 p.m.  | .. present.  |
| 7 a.m.      | .. none.    | 9 p.m.  | .. present.  |
| 9 a.m.      | .. none.    | 10 p.m. | .. numerous. |
| 11 a.m.     | .. none.    | 11 p.m. | .. numerous. |

The advent of the embryos appears to be very rapid, as indicated by the fact that while at 7.30 p.m. none could be found, at 8 p.m. they were fairly numerous. Their disappearance was equally abrupt. The number, which average about twelve in a drop of blood equal to two minims, was greatest between the hours of 10 p.m. and 2 a.m. On one occasion a solitary embryo was found at 10.30 a.m. It was in every respect similar to those found during the night, except that it was not so active. This was after the lymphatic mass in the groin had been removed by operation. This was the only occasion when the worm was found during the day, and may be regarded as purely accidental.

It is unusual to find two or more in close proximity ; in fact, they appear to be particularly prone to remain aloof from each other. Cold soon kills them, and their habit of leaving their sheaths under its influence was frequently demonstrated. If kept at body temperature, they would remain alive even under a coverslip for forty-eight hours. An attempt to stain them *in situ* was made by giving the patient methylene blue pills, but although this was continued for a week, it was of no avail. The nuclei of the leucocytes were stained lightly. Empty sheaths were frequently found, and were noticed to be more numerous when the live embryo was not present.

The result of the blood-counts was as follows :—

|                      | 12 noon.  | 12 midnight. |
|----------------------|-----------|--------------|
| Red .. ..            | 8,552,000 | 6,720,000    |
| White .. ..          | 10,600    | 12,200       |
|                      | PER CENT. | PER CENT.    |
| Polymorphonuclear .. | 59.8      | 53.24        |
| Large mononuclear .. | 14.6      | 12.23        |
| Small mononuclear .. | 9.4       | 17.02        |
| Eosinophiles .. ..   | 12.8      | 13.29        |
| Basophiles .. .. .   | 2.5       | 4.35         |

This result only bears out what has already been described, namely the presence of eosinophilia. It seems questionable whether the increase in the eosinophilia when the worm was present, though constant, is a point from which one can draw any inference. If it were more marked, one might reasonably assume that the eosinophiles had a phagocytic action on the embryos. The counts were made frequently, but the above results are representative.

A microscopical examination of the chylous fluid obtained by aspiration of the mass in the groin demonstrated that the filaria was absent.

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## THE MEDICAL READING SOCIETY, BRISTOL.

BY

L. M. GRIFFITHS, M.R.C.S. Eng., L.R.C.P. Ed.

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RARELY will it be possible to chronicle the doings for a hundred years of a society that has never at any time had a larger membership than twelve. But as the opportunity has recently occurred in this city, such an event should not be passed over without some comment, as the history of a Medical Society during such a long period cannot fail to bring out many interesting points.

On March 28th, 1807, some medical men of Bristol decided to form "The Medical Reading Society, for the purpose of promoting medical knowledge and a friendly intercourse among its members, and for purchasing medical books." Some practical rules, very similar to those of most book or magazine clubs, received the approval of these eleven members :—<sup>1</sup>

THOMAS JERMYN, Surgeon and Apothecary, 17 Queen Square.

HENRY DANIEL, Surgeon, 52 Queen Square.

RICHARD EDGELL, Surgeon, 68 College Street.

BENJAMIN SPENCER, Surgeon and Apothecary, Paul Street, Kingsdown.

WILLIAM MORTIMER.

ROBERT LAX.

BENJAMIN GUSTAVUS BURROUGHS, Apothecary, Portland Place, Clifton.

JOSEPH MAURICE, Apothecary and Man-Midwife, Upper Maudlin Lane.

WILLIAM HETLING, Surgeon, 18 Orchard Street.

NATHANIEL SMITH, Surgeon, 34 College Green.

JOHN BISHOP ESTLIN.

<sup>1</sup> The names are given in the order in which the signatures to the rules occur. The descriptions and addresses are from Mathews's *Bristol Directory* for 1807. In this the names of Mortimer and Lax are not given, but in the 1808 *Directory* Lax appears as "Surgeon & Apothecary, 11 Queen Square," and in that for 1809 there is an entry of "Berjew and Mortimer, Surgeons & Apothecaries, 17 Bridge Street." The name of Estlin, who was the son of the Rev. John Prior Estlin, Unitarian minister and master of a successful school at St. Michael's Hill, is not in the professional list of the 1807 *Directory*, but appears in that for 1809, when his residence is given as 2 Unity Street. Burroughs seems also to have had a branch establishment, for there is an entry in 1807 of "Yeo and Burroughs, *Apothecaries*, Granby House, Hotwells, and Portland Place, Clifton." Jermyn was one of the Surgeons at St. Peter's Hospital; Spencer and Smith were two of the three "Extra Men-Midwives" of the Dispensary.

On May 15th, 1807, Bowles, one of the surgeons at the Infirmary, died. On the following morning the *Bristol Mirror* contained the applications of ten surgeons for the vacancy, amongst whom were Jermyn, Daniel, Edgell, Lax, Hetling, and Smith. Apparently only three of the ten persisted in their candidature, and Hetling was elected with 395 votes, Lowe coming second with 167, and Smith third with 74. Another vacancy occurred shortly after, and Lowe was elected in July; Daniel, Smith, and Edgell were among the unsuccessful candidates.

The members were to meet at one another's houses once a month<sup>1</sup> at half-past six o'clock. When the names were called over at seven, anyone then absent was to be fined one shilling. The fine for retaining a book longer than the time allowed was fixed at threepence each day. At the end of the year the books out of circulation were to be sold by auction, and any work not realising more than half its cost was to be taken at that price by the member who proposed it. It was considered necessary to insert in the rules that no druggist should be admitted into the Society, and it was laid down that no one should be elected a member except by a unanimous vote. One rule stated that "Each member shall keep an account of the books received by him and to whom forwarded, which account shall be regularly sent to the monthly meetings at or before seven o'clock." Omission to do this involved a penalty, apparently five shillings and half a crown at different times. The book in which the member was supposed to keep this record was afterwards known as "his green register," and notes about it frequently occur in the minutes and rules.<sup>2</sup>

The table which accompanies these notes gives the names of all the members<sup>3</sup> during the hundred years, together with the dates when they became, and when they ceased to be, members, and also shows the constitution of the Society at each change of membership. As the minute-book from April 21st, 1813, to January 20th, 1823, is missing,<sup>4</sup> there is some uncertainty about

<sup>1</sup> The day has varied from time to time.

<sup>2</sup> From the beginning of the Society a ledger was to be kept by the secretary for the entry of all books received, and by whom proposed and to whom and when they were sent. With the exception of a few years these entries are in existence.

<sup>3</sup> In a later number of the *Journal* it may be possible to give some biographical notes concerning these, and the Editor will be glad to receive anything of interest in connection with them. It will be fairly easy to obtain information about some of those who were fortunate enough to die before the issue of the *Dictionary of National Biography*, but about many it will be a matter of great difficulty to present anything like a connected account.

<sup>4</sup> It is impossible to say when the volume disappeared. It was not available in 1886, when the list of members was drawn up for the purpose of getting portraits of past members.

the dates of that period, and these are printed in *italic*. They may be taken as approximately correct, as the cash-book from 1817 and some of the fine-lists and sale-lists from 1818 to 1823 are in existence.<sup>1</sup> It will be noticed that only on rare occasions have the members been less than their full number for more than a short period. The Society has been so attractive, that men have often had to wait a long time for admission. There was no vacancy between 1894 and 1906.

The minute-books do not record much more than the election and absence of members and the names of the books proposed. It has been the custom for a long time for the secretary for the year to close his term of office by giving at the January meeting a dinner to the members. When this was introduced does not appear in the minutes.

It would naturally be expected that a society of enthusiasts such as those forming the Medical Reading Society would procure the most recent literature concerning any new development connected with the healing art. On January 20th, 1808, Willan's book on *Vaccine Inoculation*, published in 1806, was ordered.

It was not till February, 1808, that a twelfth member was proposed. Then Barton<sup>2</sup> was nominated, but at the following meeting his name was withdrawn, in consequence of a prior application made by Jermyn on behalf of Sheppard,<sup>3</sup> who, however, was not elected, because at the April meeting, after he had been twice balloted for, he did not receive a unanimous vote. At the June meeting, therefore, Barton was again brought forward, but met with the same fate as Sheppard after the vote had been twice taken. At the August meeting an acceptable member was found, when J. C. Swayne<sup>4</sup> was elected. From November till this date the Society had practically only ten members, as leave of absence had been granted to Estlin, who had gone to Edinburgh, and was away till this meeting.

Further interest in the vaccination question was apparent in

<sup>1</sup> The cash-accounts are almost complete, but many of the fine-lists and sale-lists are wanting.

<sup>2</sup> "Charles Barton, Surgeon & Apothecary, 3 Hope Square."

<sup>3</sup> "Godwyn and Sheppard, Surgeons, Redcliff Hill."

<sup>4</sup> "John C. Swayne, Surgeon, &c., 15 Cumberland Street."

1809. At the June meeting Thomas Brown's *Inquiry into the Anti-variolous Power of Vaccination* (throwing doubts on its efficacy) was ordered, and in the following month the Society unanimously agreed to have (1) *The Report on Cow-pock Inoculation from the Practice of the Vaccine-Pock Institution*, by Pearson, Nihell, and Nelson, and any other statement by that Society; (2) *The Address of the Royal Jennerian Society*, instituted 1803; and (3) *A Statement of Evidence from Trials by Inoculation of Variolous and Vaccine Matter by the Physicians of the original Vaccine-Pock Institution, Established Dec., 1799*,<sup>1</sup> printed in 1804. In January, 1810, the second edition of Bryce on the cow-pock was ordered.<sup>2</sup>

For facilitating the work of the member who had at the end of the year to compute the fines, an entry was always made of the absence of the "green register." At the meeting at Maurice's on May 26th, 1810, Estlin appealed against the fine being levied in his case, as "his book was on the table from seven to eight o'clock, and was then removed to another room in the house."

At this period, and for some time afterwards, it was the custom for the names of both present and absent members to be entered in the minute-book. For the benefit of the future historian of the Society, it is much to be wished that this practice should be restored, as it enables one to see at a glance the composition of the Society at any date. On December 21st, 1810, the cause of Jermyn's absence is stated to be "ill health," and on January 18th, 1811, both he and Spencer are among the absentees. There is no entry about the withdrawal of either of them, but as their names do not appear again, it may be taken for granted that this is about the date of their resignation. Crang<sup>3</sup> was elected in February and Baker<sup>4</sup> in March.

By rule of the Society, each original member paid a subscription of one guinea, and future members were in addition to pay an entrance fee of one guinea. Although there is no record

<sup>1</sup> The *Index-Catalogue*, vol. xv., 1894, p. 523, has 1779 by mistake.

<sup>2</sup> Some notes on the important books ordered by the Society during the hundred years would be of interest if space permitted.

<sup>3</sup> "Crang, James, Surgeon, &c., 17 Queen Square."

<sup>4</sup> "Baker, Robert, Apothecary, 3 St. James's Square."

of it in the minute-book, it would appear that at the beginning of 1811 the entrance fee was raised to two guineas, for in the accounts for that year the contributions of Crang and Baker are entered at three guineas each. At the annual meeting on January 17th, 1812, it was resolved "that the funds of the Society, after the payment of last year's accounts, should be equally divided amongst the respective members." This resulted in the payment of £4 5s. 11½d. to each member except Daniel, who, probably in correction of some error in his previous account, received £4 13s. 11½d. Daniel, who was the proposer of this distribution of the funds, resigned his membership in March, when Edgell also withdrew. At the next meeting Smith and Lax left the Society. It looks as if there was some rift in the lute, for then only five of the original members were left, and when, at the meeting in May, Crang withdrew, there had been five resignations in two months. At this May meeting a Committee, which had been appointed in the previous month, should have reported concerning the claims of the Society upon those gentlemen who had withdrawn, but there is no record in the minutes of their report, which no doubt was presented, as in the following December a special note was sent to Crang, who had refused to pay his fines.

The Society was evidently anxious at this time to have as members only those who would give it strength, for in May, when there were five vacancies, the name of William Maurice was withdrawn on account of his absence from the country. But Stock<sup>1</sup> and Prichard<sup>2</sup> were then elected, and at the June meeting Sheppard, who had failed at the ballot in April, 1808, was received into the Society; but although there were two vacancies, the Society would not have either Porter,<sup>3</sup> who had been proposed in May, or Perry,<sup>4</sup> who was balloted for in July; and the same fate awaited the younger Gold<sup>5</sup> on January 15th, 1813, on which

<sup>1</sup> "Dr. J. E. Stock, 6 Park Street."

<sup>2</sup> "Dr. J. C. Prichard, Berkeley Square."

<sup>3</sup> Dr. W. Ogilvie Porter, 29 Portland Square, brother of Jane Porter who wrote *The Scottish Chiefs*.

<sup>4</sup> "Perry, Chas. James, Surgeon and Apothecary, 13 North Street."

<sup>5</sup> "Gold, Francis, Junr., Apothecary, 7 College Green."



date the resolution appears affirming the entrance-fee for new members at two guineas, although Prichard, Stock, and Sheppard were to be asked to pay only one guinea each.<sup>1</sup>

When the membership was only ten, the first minute-book closes with the meeting of April 21st, 1813. After this date reference should be made to the tabulated list for the dates of the election and departure of each member.

Whether any members were elected and withdrew during the ensuing four years it is impossible to say, for the next extant record of the Society is the statement of accounts for 1817, presented at the annual meeting on January 20th, 1818. In this are the names of William Swayne and Gold. The annual subscription was then half a guinea.

The sale-list of January, 1818, affords the information that the Society did not limit itself to medical literature, for it contains *The Quarterly Review*, *The Edinburgh Review*, and *The British Review*.

Between this date and March, 1823, when it was discontinued, the newspaper called *The Literary Gazette* had been ordered, and also the *Westminster Gazette*, for which a member held himself responsible.

When the rules were revised in 1820, the meetings were held on the third Saturday in every month from half-past six<sup>2</sup> till eight o'clock; the entrance fee was confirmed at two guineas, and the subscription was to be the amount necessary to defray the expenses.

Till 1823 it was a rule that the meetings should be held in the city; but on April 17th, when Hetling proposed to receive the Society either at his own house or at Reeves's Hotel,<sup>3</sup> it was resolved that the meeting should be at his house, 24 Royal York Crescent, to which he had just moved from 18 Orchard Street; and it was further resolved that as Goodeve was a resident in Clifton, living at 22 Mall, he should not be expected to receive the Society in Bristol. The distinction between Bristol and

<sup>1</sup> When Prichard rejoined the Society in 1832, he paid the entrance-fee of two guineas.

<sup>2</sup> Altered before 1823 to seven o'clock.

<sup>3</sup> Now the Turkish Baths.

Clifton seems to have been up to this time rigidly maintained, and it was not till the Reform Act came into force in 1832 that Clifton was added to the parliamentary borough. In 1835 it was included in the municipal area.

In December, 1823, the *Lancet*, the first number of which was dated Sunday, October 5th, 1823, was ordered from the commencement, but in the following February "it was resolved that the *Lancet* is a publication unfit for this Society, and that it be discontinued."

The fine for non-attendance, after having been increased at some date not discoverable to two shillings for absence during the whole meeting, was reduced to one shilling in January, 1825; and in the following June the Society re-considered its action in reference to the *Lancet*, and ordered it in half-bound volumes, giving the impression that thus the members would receive less contamination than by touching the unclean thing in weekly numbers. In September Howell,<sup>1</sup> Wilson,<sup>2</sup> and Nathaniel Smith<sup>3</sup> "were balloted for as members, and not received."

The two shilling fine for non-attendance at eight o'clock was restored in January, 1826, when the Society determined to take the *Lancet* again in numbers, and also to be responsible for the *Westminster Review*.

The dissatisfaction of the Society with the *Lancet* was again in evidence in August, 1828, when a proposition was carried that "This Society, considering the *Lancet* as a publication injurious to the respectability and best interests of the profession and disgraceful to the medical men who conduct it, resolves that its circulation in the Society be henceforth discontinued."

In 1829 it was decided to give up the *Quarterly, Edinburgh, and Westminster Reviews*.

At the annual meeting in January, 1831, the hour of meeting was altered to eight instead of seven, and in 1834 the day was

<sup>1</sup> Dr. John Howell, living at 45 Royal York Crescent, was one of the physicians at the Clifton Dispensary, then at 1 Dowry Square.

<sup>2</sup> Wilson's name first appears in the *Directory* for 1826 in partnership with Mortimer at 17 Bridge Street.

<sup>3</sup> He had retired in 1812, and was evidently seeking re-election.

changed to the first Wednesday of each month, and it has remained so till the present time.

At this time it was resolved to take again the *Literary Gazette*, which the Society had been without since March, 1823.

An attempt to reintroduce the *Lancet* failed in January, 1835, but was successful at the next annual meeting in 1836, when it was also decided to subscribe for the *British and Foreign Quarterly Review*.

A rule that no accumulated fines on a book should exceed one half of its prime cost was carried in January, 1837, and in the following year it was decided to abolish the second fine of one shilling imposed on absentees from the meetings, but at the next annual meeting it was again restored.

It was unanimously resolved on January 8th, 1840, to discontinue the "Green Register."<sup>1</sup> At the next annual meeting the Society ordered the *Provincial Medical and Surgical Journal*,<sup>2</sup> but resolved again to give up the *Literary Gazette*.

Nothing of importance is recorded in the minutes from this time till January, 1846, when the following propositions were carried unanimously: (1) That Sunday be a "*dies non*;" (2) That the days of transfer be Monday and Thursday, and that the period of detaining a book be always three days or a multiple of three days; (3) That the Green Register be restored.<sup>3</sup> It was also determined once more to give up the *Lancet*.

In January, 1847, it was resolved "that Mr. Coates [who had resigned in 1837] be allowed to read the books when out of circulation upon the payment of one guinea per annum."

In January, 1848, the *Lancet* seems to have been again taken on the condition of one member being responsible for it. At the April meeting we can imagine that a lively discussion took place,

<sup>1</sup> See p. 224.

<sup>2</sup> The precursor of the *British Medical Journal*.

<sup>3</sup> Among the Society's books are Morgan's register from 1846 to the time he left the Society, in 1872; George Hetling's from January, 1846, to December, 1847, and in the same volume William Cross's from January, 1848, to January, 1870; Estlin's from May, 1846, to December, 1854, together with that of Hore, who succeeded him, from May, 1855, to December, 1870; Brittan's from May, 1865, to November, 1873.

for it is recorded that three gentlemen, "tho' 3 minutes after time by the institution clock, pleaded being in time by their watches, and it was determined by 5 to 4 that they should not be fined."

In the minutes of February, 1849, there is a vague record concerning "Nathaniel Smith, who was proposed and seconded," but there is no note of his rejection, and he was certainly not elected. As he had failed at the ballot in 1825, this was his second unsuccessful attempt to re-enter the Society, from which he had withdrawn in 1812. The vacancy for which he was nominated was not filled till March, 1850.

In 1854 the Society again took the responsibility of the *Lancet*, as the member who had proposed it in 1848 declined any longer to have it at half-price, but as a member was willing upon that condition to take the *Quarterly Review* and the *Edinburgh Review*, they were again circulated in the Society.

The *Lancet*, however, remained in favour with the Society but a short time, for in April, 1854, it was resolved "That in the opinion of the members of this Society the conduct of the *Lancet* of late (more especially with reference to the proceedings in the case of Mr. Gay at the Royal Free Hospital) has not been such as becomes the Journal claiming to be the organ of an enlightened and honorable profession—and therefore, that it be discontinued." The circumstances were connected with the dismissal of the well-known surgeon, John Gay, from the Hospital in December, 1853. This caused much indignation among many members of the profession, and a meeting<sup>1</sup>—at which it was suggested that Thomas Henry Wakley, son of the editor of the *Lancet*, and who was one of the surgeons at the Hospital, had had something to do with it—was held on January 18th, 1854, to protest against the action of the committee of the Hospital. The pages of the *Lancet* for the first half of 1854 are amply provided with very strong language on this subject.

<sup>1</sup> The secretary of the organisation of this meeting was Harvey Ludlow, brother of Ebenezer Ludlow, successively Resident Medical Officer and first Assistant-Physician at the Bristol Royal Infirmary. The Royal Medical and Chirurgical Society, at its meeting on March 1st, 1854, also decided to withdraw the *Lancet* from its list.

On January 10th, 1855, there is a note that "Mr. Swete<sup>1</sup> was unanimously elected an honorary member as successor to Mr. Coates."<sup>2</sup> No reason is stated for the choice of Mr. Swete, who had never been in the Society. There is nothing in the revised rules of 1820 or in the 1877 edition about honorary members; but a resolution may have been passed between 1820 and 1823 in reference to them, and this may have been in evidence at the time, although the minute-book for that period has been lost. Coates had resigned in 1837 after a membership of less than five years, and there is no record why the special privilege had been conferred upon him. At this January, 1855, meeting Estlin, who had been in the Society more than forty-seven years, resigned, and he was very properly made an honorary member.<sup>3</sup> Upon this occasion the sins of the *Lancet* had been partly condoned, and only eight months after the emphatic resolution condemning it, it was again ordered for the Society, but only on the undertaking of a member to purchase it at the sale at half-price.

At the October meeting in 1855, the Society, having to choose between William Budd and Sawyer, elected the former.

The annual meeting in January, 1856, decided that the Society should take the *Lancet*.

A proposal that the Society should no longer circulate the *Quarterly Review* and the *Edinburgh Review* failed in January, 1857, to find a seconder; and at the next annual meeting the *Athenæum* was added to the list on the same terms as the *Reviews* were taken in 1854, but it remained only for twelve months. The same member who had proposed the discontinuance of the *Reviews* failed again in 1857 to secure it. In March it was resolved

[<sup>1</sup> "E. H. Swete, surgeon, 1 Dowry Parade," the author of *Flora Bristolensis*, 1854, on the title-page of which he is described as "Lecturer on Botany at the Bristol Medical School." A search through the minute-books of the School has failed to discover any entry made about him.]

<sup>2</sup> The title of honorary member was a misnomer, as Coates was required to pay an annual subscription (see p. 230). The resolution of January, 1847, gave him no distinctive title. Mr. Swete paid a guinea a year for two years.

<sup>3</sup> Smerdon, who had been "acting secretary" for thirty years, was made an honorary member upon his resignation on account of illness in 1870. Crosby Leonard was elected an honorary member in July, 1879, after a membership of nearly twenty years, but he lived to enjoy the honour only a few months.

"that Mr. Goodeve be an associate of the Society," on the understanding that he "should be liable for an annual subscription, but not for fines;" but the minutes afford no information as to the reason of this step, which was no doubt taken on account of his long membership.<sup>1</sup> Probably the connection by associateship, for which there seems no provision in the rules, was a merely nominal one, although, as he was not to be fined, it would appear that he was to receive the books, perhaps after they had gone the round of the members.

The Society declined in January, 1860, to add *Bentley's Quarterly Review*<sup>2</sup> to the list, and in 1861 it decided to give up the *Quarterly Review* and *Edinburgh Review*, which, however, were restored in 1864.

A new departure is chronicled in July, 1864, when a sub-committee was appointed "to make arrangements for the excursion," and in June, 1865, two members were requested "to arrange for the annual expedition." A member of the Society at the time recollects going to Aust, where they dined and geologised, but no information is forthcoming in reference to the other outing, and probably there were only these two.

The desire for high-class periodical literature other than medical was frequently manifested, and in January, 1869, the *Revue des Deux Mondes* was ordered, but remained on the list only till January, 1870, when with the *Quarterly Review* and the *Edinburgh Review* it was discontinued.

Social changes made it desirable to alter the hour for meeting, and in January, 1871, it was decided to make this nine o'clock instead of eight, and at that hour it has since remained. And on December 4th, 1872, it was agreed that the annual meeting should be held in December instead of January, thus giving more opportunity for the transaction of business than on the evening of the dinner. In the revised rules, which were issued in 1877, the January meeting is called the annual meeting, but in November, 1878, the resolution of December 4th, 1872, was re-adopted.

In January, 1881, the rule referring to the fine-committee

<sup>1</sup> Goodeve had resigned in the previous August after having been a member for 38 years.

<sup>2</sup> This died after its second volume.

was elaborated with much detail, and in 1882 some minor alterations about the election of secretary were adopted.

In order to facilitate the ordering of books, it was agreed in 1883 to take in the *Bookseller*, a monthly trade-journal giving classified lists of new publications, and it was resolved that the secretary should produce it at each meeting; but this useful periodical seems to have been in favour for only one year.

In 1884 the Society decided to make an effort to procure the portraits of all past members. This has succeeded to some extent, and they are preserved in albums among the archives of the Society.<sup>1</sup>

Greig Smith, at his secretarial dinner in 1885, embellished the *menu* card with some lines of verse.<sup>2</sup>

In 1891 the Library of the Bristol Medico-Chirurgical Society was opened in the Literary and Philosophic Club, and was moved to the Medical Department of University College in 1893. The Reading Society, at its meeting in January, 1902, nobly gave all its periodicals to the library, but in 1904 they "were presented to those members wishing to have them."

At the meeting on March 7th, 1907, "it was unanimously

<sup>1</sup> The following have not yet been obtained, and the Society would be grateful for any help in securing them.

|            |            |            |          |
|------------|------------|------------|----------|
| Jermyn     | Gold       | Stock      | Mortimer |
| B. Spencer | J. Maurice | Bernard    | Goodeve  |
| Daniel     | Gilby      | W. Maurice | Hore     |
| Edgell     | Sheppard   | Howell     | Ring     |
| Lax        | Baker      | King       |          |

Arrangements would be made for photographing any portraits that may be lent for the purpose.

<sup>2</sup> ESTO MIHI, ERO TIBI.

Twelve Medicos of high renown,  
In this our ancient Western Town,  
Harmoniously combine  
To take in books for culture's sake,  
Meet once a month for tea and cake,  
And once a year to dine.  
These twelve, of varied reputation,  
Are competent to treat a nation  
For, be your ailment what you please,  
There's one at least for your disease.  
Of eyesight should you threaten loss,  
The man to make you see is **Cross**;  
And should your reason show a flaw,  
The man to lock you up is **Shaw**;  
And if you think you cannot hear,

Let **Harsant** peep into your ear.  
From hidden holes your germs to ferret  
There's none so 'cute as **Markham Skerritt**;  
His microscope will soon determine  
How **Shingleton** will kill the vermin;  
And livers weary of their life  
Find comfort in the arms of **Fyffe**.  
With **Griffiths** strong on vaccination  
And apt Shakespearian quotation,  
With **Lansdown** for our angiomas,  
And **Dobson** for round-celled sarcomas,  
We need not fear: but if more ill,  
There's **Beddoe** and there's **Priehard** still.  
Should these eleven fall to mend you,  
Then **Greig Smith's** knife will gently end you.





There is no information about the Secretaries for 1874, 1875, 1876, 1821, and 1822. I have assumed that the older members who had not been secretaries were so in turn, although the handwriting of the cash accounts for 1820-22 is evidently the same as that for 1819.

PERIOD OF MEMBERSHIP.

MEMBERS AND THEIR SECRETARIAL YEARS.

|           |                                   |                    |
|-----------|-----------------------------------|--------------------|
| 1807-1811 | Mr. THOMAS JERMYN                 | (1807)             |
| 1807-1812 | 1 Mr. HENRY DANIEL                | (1809)             |
| 1807-1812 | Mr. RICHARD EDGELL                | (1811)             |
| 1807-1811 | Mr. BENJAMIN SPENCER              |                    |
| 1807-1849 | Mr. WILLIAM MORTIMER              | (1818, 1835)       |
| 1807-1812 | Mr. ROBERT LAX                    | (1808)             |
| 1807-1822 | Mr. BENJAMIN GUSTAVUS BURROUGHS   | (1814)             |
| 1807-1819 | Mr. JOSEPH MAURICE                | (1815)             |
| 1807-1837 | 2 Mr. WILLIAM HETLING             | (1812, 1817, 1832) |
| 1807-1812 | 3 Mr. NATHANIEL SMITH             | (1810)             |
| 1807-1855 | 4 Mr. JOHN BISHOP ESTLIN          | (1816, 1838)       |
| 1808-1847 | 5 Mr. JOHN CHAMPENY SWAYNE        | (1820, 1837)       |
| 1811-1812 | Mr. JAMES CRANG                   |                    |
| 1811-1825 | Mr. ROBERT BAKER                  | (1813)             |
| 1812-1839 | 6 Dr. JAMES COWLES PRICHARD       | (1819, 1833)       |
| 1812-1830 | 7 Dr. JOHN EDMONDS STOCK          | (1827)             |
| 1812-1824 | Mr. EDWARD W. SHEPPARD            | (1822)             |
| 1814-1819 | 8 Mr. FRANCIS GOLD                |                    |
| 1814-1825 | 9 Mr. WILLIAM SWAYNE              | (1823)             |
| 1819-1820 | Dr. WILLIAM GILBY                 |                    |
| 1820-1835 | Mr. WILLIAM MAURICE               | (1824)             |
| 1820-1858 | 10 Mr. WILLIAM JAMES GOODEVE      | (1825, 1842, 1850) |
| 1823-1859 | Mr. ISAAC LEONARD                 | (1826, 1843, 1855) |
| 1824-1843 | Mr. JOHN KING                     | (1827)             |
| 1825-1872 | 11 Mr. WILLIAM FREDERICK MORGAN   | (1828, 1847, 1863) |
| 1825-1832 | Dr. CHARLES EDWARD BERNARD        | (1829)             |
| 1828-1832 | Mr. JOHN GRANT WILSON             | (1830)             |
| 1830-1845 | Mr. JOHN HARRISON                 | (1831)             |
| 1832-1837 | Mr. WILLIAM COATES                | (1834)             |
| 1835-1870 | Mr. CHARLES SMERDON               | (1836, 1853, 1867) |
| 1837-1837 | Dr. JOHN HOWELL                   |                    |
| 1838-1848 | 12 Mr. GEORGE HILHOUSE HETLING    | (1839)             |
| 1838-1844 | 13 Mr. WILLIAM BENJAMIN CARPENTER | (1840)             |
| 1839-1875 | Dr. ALEXANDER FAIRBROTHER         | (1841, 1854, 1868) |
| 1844-1856 | 14 Mr. JOHN COLTHURST             | (1844)             |
| 1844-1885 | 15 Mr. AUGUSTIN PRICHARD          | (1845, 1864)       |
| 1845-1858 | 16 Mr. JOSEPH GRIFFITHS SWAYNE    | (1846)             |
| 1847-1858 | 17 Mr. ROBERT WILLIAM COE         | (1848, 1852)       |
| 1848-1875 | Mr. WILLIAM CROSS                 | (1849, 1865)       |
| 1850-1855 | Mr. EDWARD WALDO                  | (1851)             |
| 1855-1871 | Mr. HENRY AUGUSTUS HORE           | (1856, 1869)       |
| 1855-1869 | 18 Dr. WILLIAM BUDD               | (1857)             |
| 1856-1877 | 19 Mr. THOMAS GREEN               | (1858, 1873)       |
| 1858-1865 | Dr. HENRY EDWARD FRIPP            | (1859)             |
| 1858-1873 | 20 Dr. EDWARD LONG FOX            | (1860)             |
| 1858-1885 | Dr. JOHN BEDDOE                   | (1861)             |
| 1859-1879 | 21 Mr. CROSBY LEONARD             | (1862)             |
| 1865-1882 | 22 Dr. FREDERICK BRITAN           | (1866)             |
| 1869-1878 | 23 Mr. ROBERT WILLIAM TIBBITS     | (1870)             |
| 1870-1876 | Mr. EDMUND COMER BOARD            | (1871)             |
| 1871-1873 | 24 Mr. THOMAS EDWARD CLARK        | (1872)             |
| 1873-1877 | Dr. WILLIAM HENRY SPENCER         | (1874)             |
| 1874-     | Dr. ROBERT SHINGLETON SMITH       | (1875, 1890)       |
| 1874-1892 | Mr. NELSON CONGREVE DOBSON        | (1876, 1891)       |
| 1876-1893 | Mr. FRANCIS POOLE LANSDOWN        | (1877)             |
| 1876-1892 | Mr. LEMUEL MATTHEWS GRIFFITHS     | (1878)             |
| 1876-     | 25 Dr. EDWARD MARKHAM SKERRITT    | (1879, 1898)       |
| 1877-1881 | Mr. CHARLES GORE RING             | (1880)             |
| 1877-     | Dr. JOHN EDWARD SHAW              | (1881, 1899)       |
| 1879-1885 | 26 Dr. WILLIAM JOHNSTONE FYFFE    | (1882)             |
| 1879-1892 | Mr. FRANCIS RICHARDSON CROSS      | (1883)             |
| 1881-1886 | 27 Mr. JAMES GREIG SMITH          | (1884)             |
| 1882-1906 | Mr. WILLIAM HENRY HARSANT         | (1885, 1900)       |
| 1885-1893 | Dr. ARTHUR BANCKS PROWSE          | (1886)             |
| 1885-1891 | Mr. CHARLES FREDERICK PICKERING   | (1887)             |
| 1885-1906 | Mr. ARTHUR WILLIAM PRICHARD       | (1888, 1901)       |
| 1886-     | Dr. JOHN MICHELL CLARKE           | (1889, 1902)       |
| 1891-     | Mr. JAMES PAUL BUSH               | (1892, 1903)       |
| 1892-     | Mr. JOHN DACRE                    | (1893, 1904)       |
| 1892-1893 | Dr. PATRICK WATSON WILLIAMS       |                    |
| 1892-     | Dr. GEORGE PARKER                 | (1894, 1905)       |
| 1893-     | Dr. JAMES SWAIN                   | (1895, 1906)       |
| 1894-     | Dr. ROBERT GUTHRIE POOLE LANSDOWN | (1896)             |
| 1894-     | Dr. BERTRAM MITFORD HERON ROGERS  | (1897)             |
| 1906-     | Mr. JAMES TAYLOR                  | (1907)             |
| 1906-     | Mr. GEORGE MUNRO SMITH            |                    |





- 1 See *Bristol M.-Chir. J.*, 1890, viii. 186-7.
- 2 See *Bristol M.-Chir. J.*, 1890, viii. 182-3; 1892, x. 268.  
3 See *Bristol M.-Chir. J.*, 1890, viii. 187-8.  
4 See *Dict. Nat. Biog.* and Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 10-14.  
5 See *Bristol M.-Chir. J.*, 1892, x. 269-70, 289-90.  
6 Resigned in 1825, but was re-elected in 1832. See *Dict. Nat. Biog.*; *Bristol M.-Chir. J.*, 1890, viii. 176-8; 1892, x. 265; Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 14-16, 25.  
7 See *Bristol M.-Chir. J.*, 1890, viii. 172-4.  
8 See Latimer's *Annals of Bristol in the Eighteenth Century*, 1893, p. 524.  
9 See *Bristol M.-Chir. J.*, 1890, viii. 169-70.
- 10 See Latimer's *Annals of Bristol in the Eighteenth Century*, 1893, p. 524.
- 11 See *Bristol M.-Chir. J.*, 1890, viii. 170.
- 12 See *Bristol M.-Chir. J.*, 1890, viii. 183-4; 1892, x. 272.  
13 Became M.D. in 1839. See *Dict. Nat. Biog.* and Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 30-2.  
14 See *Bristol M.-Chir. J.*, 1892, x. 272.  
15 See his *Few Medical and Surgical Reminiscences*, 1896, and *Some Incidents in General Practice*, 1898; *Bristol M.-Chir. J.*, 1892, x. 272; 1898, xvi. 1-15.  
16 Became M.D. soon after joining. See *Bristol M.-Chir. J.*, 1892, x. 272; 1903, xxi. 193-202.  
17 Resigned in 1848, upon leaving England, but was re-admitted in 1850. [The end of the secretarial work for 1848 was taken by Hetling. See *Bristol M.-Chir. J.*, 1892, x. 273.
- 18 See *Dict. Nat. Biog.*; *Bristol Royal Inf. Reports*, 1878-79, i. 361-7; *Bristol M.-Chir. J.*, 1892, x. 273.  
19 See *Bristol M.-Chir. J.*, 1892, x. 272.  
20 See *Bristol M.-Chir. J.*, 1892, x. 273; 1902, xx. 97-105.
- 21 See *Bristol Royal Inf. Reports*, 1878-79, i. 210-25, 342-60; *Bristol M.-Chir. J.*, 1892, x. 273.  
22 See *Bristol M.-Chir. J.*, 1891, ix. 67-70; 1892, x. 273.  
23 See *Bristol Royal Inf. Reports*, 1878-79, i. 226-31.
- 24 Became M.D. in 1872. See *Bristol M.-Chir. J.*, 1892, x. 287.
- 25 Died April 29th, 1907. See *Bristol M.-Chir. J.*, 1907, xxv. 97-108.
- 26 See *Bristol M.-Chir. J.*, 1901, xix. 97-100.
- 27 See *Bristol M.-Chir. J.*, 1897, xv. 105-21.



carried that to celebrate the centenary of the Society, a dinner should be held on the day of meeting nearest to the date of inauguration of the Society," and that past members be invited as guests of the Society. In accordance with this resolution the twelve members of the Society and six former members dined together at the Clifton Club on April 3rd.<sup>1</sup>

Although the limited information afforded by the records has made it impossible to provide anything like an adequate history of the Society, it would be wrong to close this fragmentary account without giving a full meed of praise to it for the indirect benefit which it has conferred upon the local profession, whose indebtedness to it should be distinctly recognised. During the long period of a hundred years a small Society, numbering many scholarly and prominent men, has shown the necessity, in keeping abreast of the times, of having constantly before it the best literature obtainable; and its continuance is evidence that the needs of an enlightened profession are not entirely met by the provision of an excellent reference library, such as local medical practitioners have at their command, but that it is essential that there should be the means of consulting desirable books and periodicals at more leisure than is possible with a library which is not a lending one.

The Society, now so strongly representative of all that is best and highest in the profession, and with a century's good work as its voucher, could, by taking the initiative in the founding of a medical institute or club that would bring together practitioners in closer professional and social relationship, add to the usefulness which hitherto it has been able to achieve. Such an institution should elicit the practical sympathy and hearty co-operation of the local profession, members of which should see in it an opportunity for mutual help and encouragement in their difficulties and disappointments; and the Society would have the privilege of extending, in an ever-widening circle, the purpose of "promoting medical knowledge and friendly intercourse," which its originators set before themselves as their object, and which succeeding generations have so well and so honourably maintained.

<sup>1</sup> A photograph of the occasion is preserved in the minute-book.

# Progress of the Medical Sciences.

## MEDICINE.

For this summary of **the pathogenic streptococci** we are indebted to Dr. I. Walker Hall, Professor of Pathology, University College, Bristol, and Pathologist to the Bristol Royal Infirmary.

It has always been difficult to satisfactorily classify pathogenic streptococci. Morphological characters, such as the size of the cocci and the length of their chains, are insufficient. The several staining reactions are not precise enough for accurate differential diagnosis. Apart from broth, the ordinary culture media do not yield information which permits useful deductions. Even the pathogenicity of the organisms may render but little help, since their virulence is easily lost during cultural or other methods, or altered, or raised, by passage through susceptible, or non-susceptible, animals. Serum reactions have also failed to distinguish distinctly between the various types, a fact which will be well appreciated by those who have used anti-streptococcus serum.

An investigation made, however, by Mervyn Gordon<sup>1</sup> upon the chemical powers, or metabolic reactions, of streptococci, has opened up a new field of much promise. As a result of a number of tests of the action of streptococci on various substances, he has found that the following may be employed for diagnostic purposes :—

- Two dissaccharides : saccharose and lactose.
- One trisaccharide : raffinose.
- One polysaccharide : inulin.
- Two glucosides : salicin and coniferin.
- One alcohol : mannite.

These, together with the clotting of milk, and the reduction of neutral red under anærobic conditions, constitute a series of tests which point to the type of organism involved. They are not infallible, and the individual organisms exhibit considerable variations, but they permit conclusions within certain limits.

Staphylococci also may be differentiated by other tests of a similar nature, but the same precautions must be observed in making the deductions. No hard and fast line is permissible.

From a correlation of all the available records (about 1,200 strains) Andrewes and Horder<sup>2</sup> propose the following classification. Each type may be divided into a number of sub-types or variants :—

<sup>1</sup> Gordon, " Report to Local Government Board," 1906.

<sup>2</sup> Andrewes and Horder, *Lancet*, 1907, i. 167.

1. **Streptococcus equinus**, derived chiefly from air, dust, horse-dung, &c. Generally non-pathogenic.
2. **Streptococcus mitis**. Found in human saliva and fæces. Occasionally pathogenic.
3. **Streptococcus pyogenes**. Pathogenic.
4. **Streptococcus salivarius**. Occurs in saliva and intestine. Pathogenic.
5. **Streptococcus anginosus**. Isolated from "sore throats." Pathogenic.
6. **Streptococcus fæcalis**. Occasionally pathogenic.
7. **Pneumococci**. Pathogenic.

The reactions of these organisms are stated in the following table (Andrewes and Horder, ix.) :—

| Types.                        | Milk clot. | Neutral red. | Saccharose. | Lactose. | Raffinose. | Inulin. | Salicin. | Coniferin. | Mannite. | Growth at 20° C. | Morphology. |
|-------------------------------|------------|--------------|-------------|----------|------------|---------|----------|------------|----------|------------------|-------------|
| <i>Streptococcus pyogenes</i> | .          | .            | +           | +        | ...        | ...     | ±        | ...        | ...      | +                | Longus.     |
| " <i>salivarius</i>           | +          | ±            | +           | +        | ±          | ...     | ...      | ...        | ...      | ±                | Brevis.     |
| " <i>anginosus</i>            | +          | ±            | +           | +        | ...        | .       | ...      | ...        | ...      | ±                | Longus.     |
| " <i>fæcalis</i>              | +          | +            | +           | +        | ...        | ...     | +        | +          | +        | +                | Brevis.     |
| <i>Pneumococcus</i> .. ..     | ±          | ...          | +           | +        | +          | ±       | ...      | .          | ...      | ...              | Brevis.     |

It is of interest to consider the relation of diseased processes to the particular type of streptococcus. The following figures are taken from the papers available :—

1. **Suppuration.**

|                               |         |           |
|-------------------------------|---------|-----------|
| <i>Streptococcus pyogenes</i> | .. .. . | 30 cases. |
| " <i>salivarius</i>           | .. .. . | 5 "       |
| " <i>anginosus</i>            | .. .. . | 8 "       |
| " <i>fæcalis</i>              | .. .. . | 2 "       |
| <i>Pneumococcus</i>           | .. .. . | 19 "      |

2. **Cystitis.**

|                              |            |          |
|------------------------------|------------|----------|
| <i>Streptococcus fæcalis</i> | .. .. .    | 2 cases. |
| " "                          | (variants) | .. .. .  |
| " <i>salivarius</i>          | .. .. .    | 2 "      |

Sometimes the streptococci were present alone, sometimes they were associated with *B. Coli*. It is quite evident that the organisms were intestinal in origin. The *Streptococcus pyogenes* has not been met with in this condition.



3. **Erysipelas and Cellulitis.**  
Streptococcus pyogenes alone. No other forms.
4. **Serous Effusions.**  
Streptococcus pyogenes .. .. . 3 cases.  
" anginosus .. .. . 1 case.
5. **Non-suppurative peritonitis,**  
Streptococcus pyogenes (variants) .. .. 4 cases.  
" salivarius .. .. . 3 "
6. **Septicæmia.**  
(a) *Puerperal.*  
Streptococcus pyogenes .. .. . always.  
(b) *Following primary streptococcal infection.*  
Streptococcus pyogenes and variants 13 cases.  
" salivarius .. .. . 1 case.  
" anginosus .. .. . 1 "  
" fæcalis .. .. . 2 cases.  
Pneumococcus .. .. . 7 "  
(c) *Following infections not primarily streptococcal.*  
Streptococcus pyogenes .. .. . 7 cases.  
" salivarius .. .. . 5 "  
Pneumococcus .. .. . 2 "
7. **Malignant Endocarditis.**  
Streptococcus pyogenes .. .. . 2 cases.  
" salivarius .. .. . 11 "  
" anginosus .. .. . 6 "  
" fæcalis .. .. . 4 "  
Pneumococcus .. .. . 1 case.

The preponderance of intestinal and fæcal organisms in this condition is very striking, and suggests that in these patients the low virulence of the organisms may account for the defective "resistance."

In **scarlet fever** the results so far are not sufficiently decisive.

In **acute rheumatism** the organisms isolated appear to give the same reactions as the streptococcus fæcalis. Of course this, or another organism, may be etiologically connected with the disease, but it first must be proved that the organisms already isolated have not been those of "terminal" rather than "causative" infections.

The importance of these results will be appreciated in connection with treatment. It is obvious that the organism must not only be isolated from the lesion, but must be run to earth. Its precise identification is most valuable for prognosis and treatment.

If the indications are for serum treatment, then it is evident that in a serum prepared from organisms similar in type to those isolated from the lesion lies the hope for success.

Should it be necessary to prepare a vaccine from the isolated organism, then the dose will be regulated by a knowledge of the average virulence of the particular type it belongs to.

Investigations which are now in progress point to similar developments with regard to the several types of staphylococci.

\* \* \* \* \*

**Pernicious Anæmia.**<sup>1</sup>—The chief points of interest brought out in the discussion on pernicious anæmia are the need for a more systematic classification of the disease, and the necessity for reviewing the condition from the standpoint of the total volume of the blood and its total quantity of hæmoglobin. It has been for some time evident that an extended knowledge of the ætiological factors concerned is absolutely necessary. The attention has been focussed on blood films and blood changes quite long enough; abnormal intestinal processes have been boomed perseveringly without being sufficiently identified; the experimental pathologist must now take up the work. The discussion was opened by Hunter, who at once emphasised the differences between Addison's idiopathic anæmia and Biermer's progressive pernicious anæmia. The latter condition includes a number of different forms of anæmia, while the former is an infective hæmolytic anæmia which is precise in type and distinct in its symptoms. The blood changes in Addison's anæmia are those resulting from hæmolysis and the subsequent regeneration of the broken-down elements. Hence we hear of normoblasts and megaloblasts, as well as of microcytes and macrocytes, far too much being made of the megaloblastic appearances. In addition, the leucocytes are increased, this feature being most marked in the bone marrow, where coarsely granular myelocytes are very abundant. Both the blood and the bone marrow changes, however, vary in extent and in their relations to each other. So far as we at present know, it is impossible to place any definite reliance upon these factors. Among the infective lesions, attention is directed to an exudative, or proliferative, glossitis. To the naked eye the tongue is dry, and generally presents one or more darkly-tinged areas. Certain gastric and intestinal lesions also occur, and *post-mortem* exhibit the appearances of localised degenerative inflammation of the mucosa, and proliferative inflammation of the submucosa.

Discussing the causation of pernicious anæmia, Hunter observed that the ordinary causes of anæmia were insufficient to produce the whole features of the disease. Infection and injection with specific hæmolytic agents alone explained the usual symptoms; the importance of this conception was realised when antiseptic treatment was adopted as a routine measure.

<sup>1</sup> Impressions of a discussion at the Annual Meeting of the British Medical Association, 1907.

In some cases Hunter demonstrated the presence of streptococci in the tissues, and this indication for serum treatment was followed with success; but whether he was dealing with a primary coccal infection, or a secondary invasion of the organism in debilitated tissues, was not quite clear.

Gulland pointed out that prolonged blood destruction does not give rise to pernicious anæmia, for the condition precedes the active hæmolytic stage, and thus the toxin may interfere with the formation of the blood elements rather than promote their destruction. There may even be a "predisposition" on the part of some individuals to this action on the formation processes. Leucopenia is often a distinct feature, while the increased number of myelocytes in the bone marrow is a well-known fact. He then compared the appearance of megaloblasts in pernicious anæmia with the constant presence of megaloblasts in the early embryonic life of mammals, and suggested that the increase in the red marrow in pernicious anæmia may arise from a slow formation of megaloblastic tissue, or that, when formed, the life of the tissue may be a short one only.

Lorrain Smith suggested that more attention should be paid to the changes in the spinal cord. Those at present known consist chiefly of advanced sclerosis of various tracts (the segments corresponding to the abdominal area). Much might be learned from an examination of an early case. He also drew attention to the "simulating" forms of anæmia. Malaria is sometimes accompanied by an anæmia of a "pernicious anæmia" type, as well as a secondary anæmia. An ulcerating fibroma of the intestine was accompanied by the signs of pernicious anæmia, and malignant growths are frequently associated with a similar condition.

A most valuable means of determining the extent of the hæmolysis is afforded by the estimation of the total volume of the blood, and its total hæmoglobin contents, by the Haldane-Lorrain Smith method. In fact, it is a question whether the ordinary methods of hæmoglobin estimation throw any real light on the situation. Lorrain Smith examined seven cases of pernicious anæmia, and found that the total amount of hæmoglobin was only 50 per cent. of the normal (in chlorosis it reaches 75 per cent. of the normal, and after the hemorrhage of gastric ulcer there is only 15 per cent. loss from the normal amount). The amount of blood plasma is also an important factor, for œdema of the tissues is a constant feature in pernicious anæmia. The volume of the blood is often 60 per cent. above the normal; a reduction to the normal is a favourable symptom. The fall in the volume is generally accompanied by an increase in the percentage increase of hæmoglobin. This alteration in the volume may be regarded as a distinct effect of the toxin.

Muir observed that the toxin evidently possessed independent

characteristics, for although *bothriocephalus latus* and *saponin* acted on the tissues so as to induce megaloblastic changes, yet they did not entirely reproduce the appearances of pernicious anæmia. The bone-marrow changes should, however, be regarded as the expression of an injury rather than of a reaction, and of an injury which might be recovered from.

Hutchison recorded the fact that he had never met with a case of pernicious anæmia in children. This is of importance in connection with the ætiology of the disease. The marrow and blood-forming organs of the child are generally working at high pressure in order to meet the needs of the growing tissues, and it is easy to suppose that they might exhibit some tendencies to pernicious anæmia. But this is not the case. The only conditions in the child at all comparable to pernicious anæmia are perhaps those of the acute purpuric conditions of childhood. How can this difference between youthful and adult tissues be explained?

Melland described several cases which presented the characteristic microscopic features of pernicious anæmia without any glossitic, gastric or intestinal symptoms.

Walker Hall stated that the general nutrition in pernicious anæmia shows wide variations. The extent of the variations exceeded the individual factor, and suggested that in the "symptom complex," termed pernicious anæmia, we are dealing with the actions of different types of toxins. He emphasised the need for systematic classification. In detailing the abnormal changes of metabolism, he pointed out that protein retention was a common feature, and that the manner of the protein decomposition suggested renal changes, which deserved recognition during treatment. The cells became exhausted and fatty because of the stress of work in obtaining the necessary amount of oxygen from the diluted plasma. The output of amino acids and of lactic acid required investigation by the newer methods.

The secretion of hydrochloric acid is affected. Subacidity, or absence of hydrochloric, frequently occurs. The gastric secretion exhibits close relationships with the anæmia, being increased or diminished as the anæmia improves or changes for the worse.

The distribution of iron in pernicious anæmia varies considerably. Sometimes met with in the liver, at other times it may occur in both liver and kidney, or in the kidney alone. These peculiarities are difficult to explain.

A few cases which presented all the clinical appearances of pernicious anæmia revealed at the autopsies a number of isolated tubercles in the mesentery, or in the mesentery and liver.

Boycott dealt with the anæmias associated with animal parasites. He pointed out that the two distinct species of *ankylostoma duodenale* produced identical symptoms of disease, although their geographical distribution was so different. The

fact that the subjects of "parasitic" anæmia suffer more from the anæmia itself than from the position of the parasite in the tissues, suggests that similar conditions might obtain in the other anæmias. It is remarkable that patients with ankylostomatous anæmia possess much more physical energy than those with pernicious anæmia when the hæmoglobin percentages are about the same; in other words, the loss of hæmoglobin is felt less by the ankylostomatous, than by the pernicious, anæmia patient. Ferguson made a similar statement with regard to the Egyptian fellah, who will do a hard day's work when the hæmoglobin and red blood count are exceptionally low.

Boycott found that in ankylostomatous anæmia the total volume of the blood was increased by 100 per cent., although there was no diminution in the total amount of hæmoglobin. He suggested that the decreased quantity of hæmoglobin per corpuscle may compensate for the increased volume of the blood, so as to enable the necessary oxygenation. During recovery the number of red cells is increased beyond the normal. The pathology of the condition is not distinctly related either to hæmolytic or to hemorrhagic; it must be attributed to some alteration of the balance between the in- and outside of the vascular paths.

Ferguson drew attention to the extensive loss of blood from the large number of bites upon the intestinal mucosa. He considered that a large proportion of the bitten areas became septic, and that the products of the sepsis were responsible for some of the symptoms.

Gulland related two cases suggestive of alimentary tract infection which were decidedly improved by the continued administration of fresh uncooked bone marrow. The marrow was obtained from the shin bone of the ox, and one ounce, or more, spread upon thin slices of bread was given three times a day. At first the raw marrow may occasion retching, but this sensation disappears after a few doses. Gulland suggests that the action of the bone marrow is to neutralise the active toxic agents, and that in pernicious anæmia the bone marrow is deficient in this regard, and so succumbs to the presence of the toxin.

The sum total of the discussion does not indicate any new forms of treatment, although it points to a number of problems for investigation, and emphasises the great loss to the community when a case of pernicious anæmia is allowed to pass through our hands without sufficient record of the observations demanded.

To listen to a discussion of this kind is a depressing experience. The needs for investigation are fully evident; the objects to be aimed at are outlined clearly; the possible results are fraught with enormous benefits to the public; yet the slow progress towards fuller knowledge is appalling. The work needs special training in methods of technique, unlimited time for observation and reflection, and financial assistance to adequately maintain

those men—and their number should be a large one—who elect to devote their lives to this end. The blanks in our English system of education are perhaps most fully illustrated when the scholar becomes a wage-earner, an elector, or an elected representative; for it is our savage consideration for the care of swine and other animals, rather than that of children, or human adults, which permits the scorn of neighbouring nations and allies; they concern themselves with the care of the pig only so far as its presence or consumption affects the health of the people, but consider it a national duty to promote and finance every possible effort towards the prevention of human disease. For tangible hospital buildings, preferably new ones, for elaborate municipal decorations, for additional libraries and displays of arts, the present generation expends its energies. Would that some men followed, or even surpassed, the example of American and German citizens in their provision for the improved health of the nation! The man of foresight must surely recognise that the national physique is the first line of defence of our country, and that if we are to retain our monumental buildings and our prestige, the present racial degeneration and ill-health must be stopped. In plain words, this means financial support for investigation, and the profession must speak with definite and emphatic voice on this point. The public will respond when we honestly state our case, and logically set forth its requirements. Then when workers are numerous, and Institutes for the investigation of disease are provided, the nation as a whole will become keen upon scientific medicine, and it will not be necessary to deplore the slow progress towards the solution of the problem of this grave anæmia, which at present resists the applications of our limited knowledge.

I. WALKER HALL.

### SURGERY.

There have been few surgical advances within recent years to compare, in their practical importance, with those made in the **treatment of general peritonitis**. A few years ago it was very exceptional for any patient to recover after a widely-diffused suppurative peritonitis; but the conditions are different nowadays, and by the application of modern methods of treatment a large proportion of patients may be saved, even in cases in which there is widely-generalised peritoneal inflammation. The two most important advances in treatment are those generally known in association with the names of Drs. Fowler and Murphy; and although they have only been in use the last few years, they have become recognised as standard methods. The Fowler position consists in placing the patient in the upright sitting posture as soon as possible at the time of, or immediately after, operation; so that the peritoneal exudation may gravitate to

the lower abdomen, where drainage is provided for, away from the more dangerous diaphragmatic region. Dr. Murphy explained his methods before the American Medical Association in 1904. The principles are: (1) Rapid removal of the focus, and closure of the hole in the gut, with as little disturbance of the peritoneum as possible; (2) Drainage through the operation-wound and above the pubes; (3) Rapid procedure, preferably through the rectus, and without the insertion of sutures; (4) Food is withheld from the mouth for two or three days; (5) Continuous saline injections are given by the rectum. These are administered from an irrigator, placed from four to six inches above the level of the anus by means of tubing and a short nozzle having lateral openings. Thus from twelve to twenty pints may, under favourable conditions, be absorbed; and not only is the thirst relieved thereby, but the tongue becomes moist, there is an increase of the urinary and peritoneal flow, and the heart and kidneys are stimulated. The idea is that, by the continuous injection of saline, the direction of osmosis is reversed, and there is accordingly a free flow of peritoneal exudate through the wound.

Although these measures are generally recognised and acted upon, there are minor variations in detail employed by different surgeons, which it may be instructive to survey. In a paper read by Le Conte before the Philadelphia Academy of Surgery<sup>1</sup> and subsequently discussed, we have the following views. The chief factors in abdominal drainage through a pelvic tube are the effect of gravity and the pump-like action of the diaphragm. The rectal irrigation causes such an increase of peritoneal flow that the dressings become readily soaked, and there is an increase in the amount of urine passed. Dr. Gibbon had employed the Fowler position and Murphy treatment with success, but he had not been able to get his patients to absorb so much saline fluid as mentioned. Dr. Harte was convinced of the importance of keeping food away from patients after operation, thus materially diminishing the tendency to distension. The question of drainage was more especially considered in a paper read by Knott<sup>2</sup> before the Chicago Surgical Society and subsequently discussed, and in some respects his method presents some differences. He believes that free drainage of the infected peritoneum is the essential factor in successful treatment, and supports his argument by a record of seventeen recoveries out of nineteen cases, the fatal cases comprising one originating from the appendix, and the other from a large ruptured suppurating ovarian cyst. He thinks that the abdominal incision should always be ample, and made in the middle line either above or below the umbilicus, as the case may be. This is followed by immediate and thorough repair of the diseased parts. Then an incision is made just above the symphysis, and through this a large rubber tube at least one inch in

<sup>1</sup> *Ann. Surg.*, 1906, i. 231, 314.

<sup>2</sup> *Ibid.*, 1905, ii. 75, 316.

diameter, previously split from end to end and carrying a gauze wick, is passed to the bottom of the pelvis. Abdomino-vaginal drainage may be similarly arranged for, using a rubber tube without gauze. The abdominal cavity is then thoroughly washed out with gallons of hot salt solution, care being taken to reach all the fossæ and concealed septic areas. The upper incision is then rapidly closed, but before tying the last stitch the abdomen is filled with salt solution by means of a funnel. The lower wound is left open, and in males an additional tube, similar to the first but without the wick, is introduced to the bottom of the pelvis alongside the first. The patient is then raised to the sitting posture while yet on the table, and this position is maintained during removal and subsequently when in bed. The dressings require frequent renewal, and when the flow becomes more scanty the fluid is pumped out through the plain tube every two hours for the next twenty-four hours. All tubes may be withdrawn in from five to eight days. He makes the incision a long one, and closes it except where the drain is inserted, and attaches great importance to filling the abdomen with salt solution; and entirely avoids drainage with plain gauze. Since adopting this technique he states that his mortality has fallen from 90 per cent. to 11 per cent. He strongly objects to evisceration, partial or complete. In the discussion which followed the reading of this paper, Dr. Jacob Frank stated that the only two cases of diffused septic peritonitis that he had ever had recover in the last twenty years were treated on the lines advocated by Dr. Knott. Dr. Eisendrath had met with similar remarkable success by using the Fowler position, avoiding evisceration, but flushing copiously with saline. He pointed out the possibility of similar success by different methods, Dr. Murphy by non-irrigation saving fifteen out of sixteen, and Dr. Mordecai Price saved the whole of seventeen cases by flushing. Others remarked on the importance of not overlooking the right renal pouch; and a heroic fact was mentioned, in which a surgeon reopened the abdomen of his own son eighteen hours after an operation by another surgeon, then absent, and by means of the treatment advocated by Dr. Knott saved the boy's life.

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It is well known that after operations for generalised peritonitis there is often a considerable amount of distension or even intestinal obstruction. The surgeon is then in doubt as to whether anything further should be done. Dr. H. Lilenthal records a case in which, after operation following peritonitis with symptoms of obstruction, he reopened the abdomen above the umbilicus, let out a quantity of fluid, and performed a temporary enterotomy on a much-distended loop of jejunum, which he subsequently closed by a secondary suture, the patient recovering.<sup>1</sup> It may

<sup>1</sup> *Ann. Surg.*, 1905, i. 944.



be marked that the evidence is not clear that the enterostomy was the sole reason of success ; it may be that the liberation of the fluid was the more important factor in the relief of obstruction.

The subject was discussed at a meeting of the British Gynæcological Society,<sup>1</sup> when Mayo Robson recapitulated the lines of treatment already referred to. Differences of opinion were expressed, some recommending morphine and alcohol with free abdominal flushing, some free purgation by salines or calomel, and some the application of ice at the onset of peritonitis. It cannot be said that the subsequent discussion revealed full practical acquaintance with the advantages of modern treatment. The same may be said of a discussion on the subject at the Royal Academy of Medicine in Ireland.<sup>2</sup>

Before the Royal Medico-Chirurgical Society, Mr. Malcolm expressed views concerning inflammation similar to those previously expressed by Bantock, his view that peritonitis was due to irritation and the temperature simply a nervous reflex being met by arguments from Mr. Dudgeon, who showed that in even the so-called sterile exudate of peritonitis, micro-organisms chiefly staphylococcus albus, could be found.<sup>3</sup>

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There are two forms of acute peritonitis, pneumococcal and puerperal, which demand attention ; the former in particular having come into special prominence of late. Dr. F. S. Mathews read a paper on " pneumococcal peritonitis," with a report of five cases.<sup>4</sup> He also refers to two papers on the same subject, one by Jensen comprising 106 cases,<sup>5</sup> and one by von Brüns.<sup>6</sup> From a consideration of these papers it is seen that pneumococcal peritonitis is three times as frequent in children as in adults, and that although the sexes are equally affected in adult life, in children it is seven times as frequent in girls as in boys. The peritoneal exudate is copious, thick, and odourless, with a tendency to localisation. The majority of cases have been primary in the peritoneum, and some have been associated with or followed by pneumonia, empyema, pericarditis, otitis media or intestinal lesions. The most characteristic symptoms are : (1) Sudden onset with fever ; vomiting for a day or two ; slight pain, tenderness and distension ; little muscular rigidity. This is followed by an improvement in the symptoms.<sup>5</sup> (2) Then, with the increase of exudate, there appears a tense cystic mass in the hypogastrium, the temperature rises and becomes of remittent type, succeeded by cachexia, weakness, followed by death or recovery after operation. The localised form is more amenable to successful operation, 80 per cent. being successful. The differential diagnosis is difficult,

<sup>1</sup> *Brit. M. J.*, 1907, i. 1483.

<sup>2</sup> *Ibid.*, 1906, i. 862.

<sup>3</sup> *Ibid.*, 1905, ii. 1116.

<sup>4</sup> *Ann. Surg.*, 1904, ii. 698.

<sup>5</sup> Jensen, *Arch. f. klin. Chir.*, 1903, lxx. 91.

<sup>6</sup> Von Brüns, *Beit. z. klin. Chir.*, 1903, xxix. 57.

and no definite distinguishing point can be stated. The modes of pneumococcal infection of the peritoneum are as follows : through a wound, through the diaphragm, through the genitals, through the intestinal tract, through the blood, and from pneumococcal foci in abdominal organs. It is interesting, however, to notice that in cases of pneumonia, pneumococci may be present in the peritoneum without causing peritonitis.

With regard to puerperal general peritonitis, one may refer to a paper by Dr. Ellice McDonald on the subject.<sup>1</sup> Of eleven cases under his care, four were associated with streptococci, two with staphylococci, one with pneumococci, one with gonococci, and three with multiple infections of the streptococcus associated with the bacillus coli, gonococcus, or the bacillus aërogenes capsulatus. It will thus be seen that puerperal peritonitis is usually streptococcal and usually fatal, though not invariably so. The staphylococcus aureus has been rarely found, and although the gonococcus is such a frequent cause of salpingitis, it is not so commonly the cause of puerperal peritonitis. For further details and references to this subject the paper may be consulted ; but with regard to the surgical aspects of the question, there seems to be evidence that polyvalent anti-streptococcal serum may be of some utility, used in association with operation after the method of Murphy for peritonitis in general. That the results are improving is shown by a collection of 121 cases by Jeannin, with nearly 50 per cent. of recoveries.

T. CARWARDINE.

## OPHTHALMOLOGY.

At a recent meeting of the Ophthalmological Society held in Edinburgh,<sup>2</sup> Sydney Stephenson read a most instructive paper on the subject of the " spirochæta pallida in relation to the syphilitic affections of the eye. He prefers to call the organism of Schaudinn by its newer name of treponema pallidum, which organism has now been found in all forms and stages of syphilis, whether acquired or inherited, human or animal. From the ophthalmic point of view the following facts may be stated : (1) The treponema has been found in the apparently healthy eyes of fœtuses and of infants who have died from congenital syphilis ; (2) It has been found in lesions set up experimentally in the eyes of animals by the inoculation of syphilitic material, such as chancres or diseased glands ; (3) It has been found in actual syphilitic invasions of the human eye. The conclusion is inevitable, that in the discovery of Schaudinn's organism we have the strongest possible proof of the syphilitic nature of any given disease of the eye. A point concerning interstitial keratitis may be cleared up by our present knowledge, which has long been a mystery. The

<sup>1</sup> *Ann. Surg.*, 1907, i. 203.

<sup>2</sup> *Ophthalmoscope*, June 1st, 1907.

existence of spirochætes in the cornea, iris and choroid of the syphilitic infant gives us a hint as to how interstitial keratitis-iritis and choroiditis may be brought about later on in life. Although most of the protozoa may succumb to the natural defensive powers of the body, yet some may remain latent, perhaps in a resting stage, like the trypanosome, until roused into renewed life and activity by an exciting cause, possibly years after the original invasion. On this theory it becomes comparatively easy to understand why in predisposed subjects local injury is so commonly an exciting cause of interstitial keratitis, and why a history of traumatism is far from unknown in choroiditis in those who have acquired a hereditary syphilis. The persistence of a few spirochætes, whilst most had undergone destruction, would explain the relapses now and then observed in cases of interstitial keratitis, and similar considerations would account for the recurrences, not infrequent, of syphilitic choroiditis. In relation to this, it may interest the members of the Society to remember a case of interstitial keratitis with disseminated choroiditis recently shown at the Society's clinical evening. I mentioned the frequent occurrence of injury as an immediate cause of the specific inflammatory attack, and quoted three cases, two of brothers who had normal eyes till over twenty, when one developed keratitis following an injury from dust blowing in his eye, the other one keratitis, from a blow with a hammer in the eye. In each of these case the keratitis came on in the injured eye, but quickly spread to the uninjured organ. The third case was a man who went on apparently with good eyes till the age of 35, when a blow from a twig set up an irritation which ended in a definite attack of interstitial keratitis.

With interstitial keratitis on one's mind, its exceedingly slow course and the difficulty of finding a remedy naturally occurs to one. Mercury and potassium iodide, although no doubt both excellent in their way, seem to take less effect in interstitial keratitis than in any of the other eye troubles due to syphilis. Iritis and choroiditis both yield to their influence as to a charm, but keratitis distinctly hangs fire. Latterly dionine has come into vogue, and in dionine a good friend has been found. Combined in an ointment with atropin, in the proportion of dionine 2 per cent., atropin 1 per cent., an excellent result may be obtained. The application in the form of ointment introduced between the lids seems to take much more effect than when used as drops. Possibly the ointment, adhering to the conjunctiva for a longer time than the drops remain there, may have something to do with it; but be that as it may, dionine and atropin ointment have for me worked wonders when all other remedies have failed miserably. I can recall a young lady, whose interstitial keratitis, a very definite attack too, got well in exactly three weeks. I had prepared her, as I always do, for a long course of treatment, and

mentioned three months as a likely period. This is my own experience. Listen then to the experience of others. Karl Grossmann, of Liverpool, says<sup>1</sup> of dionine, "yet it is a drug which, if once used, with discrimination and without prejudice, is not likely to be omitted from the oculist's outfit. Though a derivate of morphia, it is characterised by the comparative absence of its toxicity, which makes it a safe remedy in eye practice. When brought into contact with the conjunctiva, either in solution, ointment, or in substance, a burning sensation is soon followed by lachrymation and fine injection, often combined with reduced sensibility; on the ocular conjunctiva a fine cobweb of lymphatic vessels becomes visible, and is gradually swallowed up by a more or less strongly-developed chemosis, which often covers the corneal limbus by a sausage-like swelling. The lids swell to such an extent that they cannot be opened, and this state reaches its maximum in about half an hour, when the œdema gradually lessens, to disappear in three to six or even twelve hours."

The action of dionine on the eye is a powerful lymphagogue; it acts, however, as an analgesic as well, but not as an anæsthetic, like cocain. In iritis and iridocyclitis, Grossmann considers we come to the affections in which dionine appears to do most good, and here the analgesic effect on the deep-seated pain is most remarkable. Every now and then one comes on a case where dionine does not produce its usual chemotic action, and in these cases it does least good; furthermore, eyes soon become used to dionine, and after the fourth or fifth application the chemosis is almost *nil*. As soon as this takes place its good effect also disappears, and increasing the dose, even to dusting the eye with the actual powder itself, produces but little reaction; its use should, therefore, be discontinued for several days, when once more its beneficial results will be apparent.

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Thompson Henderson has written an excellent article on the **healing of the corneal wound in cataract extraction**.<sup>2</sup> This paper is based on the examination of thirty-three eyes which had been operated on for cataract. In all these the clinical process of healing was progressing, or had progressed in a perfectly normal manner. In twenty-one of the cases death supervened from some intercurrent affection, in a period varying from three days to a month after the date of operation; in four the eyes were enucleated for pain and secondary glaucoma, while eight specimens were obtained from the *post-mortem* room. This gives a very good range to judge the healing processes by. He points out that in an experimental corneal incision there is a greater retraction of the anterior and posterior than of the central corneal layers, so

<sup>1</sup> *Folia Therap.*, 1907, i. 53.

<sup>2</sup> *Ophth. Rev.*, May, 1907.

that the margins of the wound, instead of appearing as two straight lines, show curved surfaces, meeting and touching in the middle, giving the appearance of two triangular spaces with bases respectively in and out. In cataract extraction wounds this appearance, while present, is modified and not evident, on account of the nature and position of the incision. Irregularities of the opposing surfaces are not uncommon, in consequence of the sawing movements with which sections are often completed, giving the wound track a notched, wavy or step-like appearance. He divides the process of repair into three stages: mediate union, primary union, permanent union and cicatrisation, the last of which, he points out, takes a much longer time to accomplish than is generally thought.

Mediate union is brought about by a fibrinous exudate, which glues the margins of the wound together at that point where the distance between them is least. This fibrinous plug is sufficient to retain the aqueous and allow of the restoration of the anterior chamber. He thinks the fibrinous plug is chiefly, if not altogether, a derivative of the altered aqueous humour, as in non-perforating wounds of the cornea, the cut surfaces show little or no fibrinous deposit.

The primary union stage is effected by the surface epithelium and the posterior endothelium. These layers proliferate and grow down the respective margins of the incision till they meet and cover not only the lips of the wound, but also the fibrinous plug that brought about the mediate union. This stage takes very varying times in its accomplishment, from three days to even a fortnight, or even longer after the operation. This disparity is ascribed to the personal factor of the vital activity of the tissues in different cases. Th's epithelial growth introduces one of the dangers following extraction, if the wound remains in a gaping condition, or the fibrinous plug is not strong enough to resist the growth of epithelium. This latter grows down and over the edge of the corneal wound, and may eventually progress over the posterior surface of the cornea on to the surface of the iris, and so block the corneo-iritic angle, causing glaucoma, for which two of the eyes were eventually enucleated—four and five years respectively—after what at first had been looked on as most successful operations.

While the stratified epithelium on the surface of the cornea is descending into the outer part of the wound, the endothelium on the posterior surface by a similar process lines the inner aspect of the incision to the completion of this primary union. Henderson points out that primary union in a corneal flap incision is thus brought about and completed without the parenchyma playing any part in the process; and judging from the series of cases examined, it is certainly not till the sixteenth day that the corneal elements proper manifest any active sign of reparative activity,

that is, not before the average patient in this country is discharged from hospital.

Permanent union is brought about by a slow and gradual growth of the corneal fibres; these, by their pressure on the epithelial plug, cause it to atrophy and finally to disappear entirely. The interspace between the two cut surfaces is thus reduced to a vanishing point, so that the normal radius of curvature of the cornea is restored.

Firm and permanent cicatrisation is not accomplished for two, three or more months, but when completed it is the exclusive product of the corneal parenchyma, with a course which it is scarcely possible to follow in its entirety. This length of time in regeneration explains a point with which we were often struck in cases of discission for congenital cataract, viz. the ease with which it is possible to reopen a paracentesis wound, even as long as three weeks after it had been first made, with an ordinary repositor, by making quite a gentle pressure on the upper edge of the corneal wound.

A. OGILVY.

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## Reviews of Books.

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**Manual of Anatomy.** By A. M. BUCHANAN, M.A., M.D. Vol. I.  
Pp. xvi., 596. London: Baillière, Tindall and Cox. 1906.

The student who is anxious to avoid knowing too much—and he is not uncommon—will welcome this book, because it seems small, and not overburdened with facts. It is a complete surprise to find that so much information has been conveyed in so small a volume. The matter has been well selected, the diction is terse and simple, the numerous illustrations are quite as good as in any English text-book, and one cannot help thinking that this book will prove a serious rival to the much more bulky works, such as Gray, Morris, &c., and we shall indeed be surprised if a successful career does not await this book, if the second volume be as good as the first, the student will welcome a volume of so convenient a size which at the same time contains such a fund of information.

It is, however, unlikely that in a first edition such a book should be absolutely free from blemishes, and there are a few to which we think well to draw the attention of the author.

The account of the development of the chondro-cranium is that which is found in all the text-books. It is not only antiquated, but absolutely erroneous. It has long been pointed out

that the notochord has a quite different relation to the chondrocranium from that represented here ; it is also well-known that the terms "parachordal" and "trabeculæ" have no real warrant in the human skull. The accounts of the processes of ossification of the various bones will bear revision, such as those of the malar bone, the mandible, the upper jaw, the sphenoid, the seventh cervical vertebra, the sacrum, the coracoid process of the scapula and ribs, and maybe others.

Speaking generally, the general description of the bones is good, and most of the illustrations are of high excellence, and a credit to the artist. Fig. 84, though very good, is too small ; and Fig. 65 does not quite correspond with the text, for although the "nasal groove" on the posterior surface of the nasal bone is shown correctly running down to the middle of the lower margin of the nasal bone, and is said in the text opposite to contain the nasal nerve, yet a nasal notch quite unconnected with this groove is said to convey outwards the terminal cutaneous branch of the nasal nerve. In the description of the cervical vertebræ, the costal and transverse processes are carefully described and distinguished from one another, yet in the description of the seventh cervical vertebra both are alluded to as transverse processes, and the old terms "anterior and posterior tubercles" are used.

With regard to the thoracic vertebræ, more might have been made of the distinguishing characters of the eleventh vertebra, especially worthy of mention being the fact that the inferior articular processes, or if not they, small tubercles at the root of the spine project below the plane of the body and spine, which never happens in the tenth or those thoracic vertebræ above, but always in the twelfth and all below. That very characteristic feature of the fifth lumbar vertebra, viz. the springing of the costal process from the body, might have been made more of, as well as the fact that the transverse diameter of the neural arch greatly exceeds its vertical.

With regard to the long bones, one notices the old fiction repeated, "that during foetal life the fibula articulates with the femur ;" and the same error with reference to the attachment of the pronator teres to the radius is repeated.

One notices that the structure of the calcaneum is not quite intelligible as rendered here, and the area of attachment of the inner head of the accessorius is surely much too small.

The sections on muscles and arteries and nerves of the limbs, which complete the book, leave little to find fault with ; but one feels bound to call attention to the scanty description of the articular branches of the external popliteal nerve.

With the exception of the blemishes to which we have drawn attention, and which no doubt will be remedied in editions which we feel sure will follow, Volume I. is excellent, and we strongly recommend it to the notice of the student who is not doing the

most advanced work. It is a creditable addition to the already large number of students' text-books of anatomy— creditable alike to author, artist and publisher.

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**Cancer of the Breast and its Operative Treatment.** By W. SAMPSON HANDLEY. Pp. xii., 232. London: John Murray. 1906.

The aim of the author is "to present for the surgeon's use a careful picture of a breast cancer, of its microscopic ramifications, and of its mode of dissemination, and upon this basis to discuss the methods of operative treatment." Questions of ætiology, pathogenesis, and diagnosis are not considered.

The greater part of the work is devoted to the development of an original hypothesis, that of "lymphatic permeation," to explain the mode of dissemination of cancer of the breast.

By this hypothesis, which is likely to be handed down to posterity as "Handley's (Lymphatic) Permeation Hypothesis," the master process in the dissemination of cancer of the breast is the spread of the growth along the fine lymphatic vessels of the pareties, independently of the transport of cancerous particles by the lymph and blood streams. The existence of the latter mode of dissemination, the "embolic" mode, is admitted, but it is not considered to be the chief process at work. The chief process is a tendril-like growth of cancer from the primary deposit in all directions in the fascial plane along the lymphatics, the growth being independent of the current of lymph. In the pareties the extension is not primarily in the skin, but in the "fascial lymphatic plexus," which lies in the subcutaneous fat upon the deep fascia.

After giving a lucid and excellently illustrated account of the macroscopic and microscopic investigations upon which the permeation hypothesis has been founded, the author proceeds, in the final chapters, to enunciate the principles which should underlie the operative treatment of breast cancer, and he suggests modifications of technique which are likely to improve the results of these operations if his hypothesis of dissemination represents the truth.

In our opinion it is the plain duty of every surgeon who operates for mammary cancer to give due consideration to the views which the author has advanced. We believe that in time all surgeons will become acquainted with them more or less thoroughly, for they seem to be endowed with "permeative" force. We advise that the acquaintance be made a thorough one at once, through the medium of the author's book itself. If we mistake not, the investigations he has recorded will mark an



important epoch in the history of the campaign against cancer of the breast ; but whether that be so or not, the fact remains that the book is one of conspicuous merit and fascinating interest.

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**The Essential Similarity of Innocent and Malignant Tumours.** By CHARLES W. CATHCART, M.A., M.B. Bristol: John Wright and Co. 1907.

Some eighty-six admirably reproduced photographs are appended to seventy-nine pages of letterpress. The latter concerns itself with the question of the relations existent between innocent and malignant tumours. The writer sets out to prove that there is a definite demonstrable gradation from innocent to malignant tumours, that this transformation in character may sometimes be observed in the same tumours, and that combinations of character may sometimes be met with.

The examples of these conditions are chiefly drawn from bony growths, and while we must admit that a good case is made out, it is a moot point whether the conclusions drawn from bony growths may be applied to other tumours. However, the matter is one of general interest, and the surgeon will find a perusal of this book both suggestive and helpful.

The impression gained from the arguments advanced is an enforcement of the doctrine of "original sin." All tumours are deemed to possess latent malignancy, even though they appear to be temporarily innocent.

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**Antenatal Pathology and Hygiene: the Embryo.** By J. W. BALLANTYNE, M.D. Pp. xix., 697. Edinburgh: William Green and Sons. 1904.

This volume is a most interesting and exhaustive statement of the results of the author's researches in a domain of pathology hitherto insufficiently subjected to scientific study. No pains have been spared to obtain the fullest possible information on the subject, and numerous specimens of various types of fœtal monstrosities and instances of congenital defects and abnormalities for the purpose of scientific description and classification. It is difficult in dealing with such a work to decide on the parts of it to which attention should be directed. While it is necessary that the whole volume should be read connectedly, in order that the valuable information contained in it may not be missed, we may still direct attention to portions of it which are perhaps of rather more general interest than others. A most detailed and clear account of the embryology is, with its chronology, given to commence with, but, as the author very justly remarks, as regards

human embryology our knowledge practically commences with the early ova described by Hubert Peters and Leopold.

We know nothing practically of the changes which occur in the fertilised human ovum before the fifth day after impregnation, which is the approximate date of the Peter's ovum, that of Leopold being a little older.

Capital plates of sections of these two ova are introduced, but unfortunately the reference lettering is not always as distinct as it might be. One of the most interesting sections is the account of experimental terato-genesis, detailing the experiments of the St. Hilaires, Charles Féré and C. Darester on the incubation of hens' eggs, showing how in various ways, by mechanical interference with the developing ovum or by subjecting it to various toxic or unnatural thermal or other influences, it is possible to produce various types of monstrous chicks.

He suggests that monsters are produced invariably by the arrest of development of a part of the fœtus at a certain stage, while the remaining parts progress normally, and shows that many monstrosities are represented at certain stages of normal development.

The chapter on maternal impressions should also be read carefully by those interested. He gives a most interesting historical account of these so-called phenomena, and one or two curious instances of his own researches into the origin of histories supposed to be established as scientific facts. When a scientific writer attributes to a certain observer as a fact observed and recorded by him a statement which was to the effect that he had seen the record made by another observer, it is easy to understand how, among the uninstructed public in any country, the extraordinary stories, many of which he quotes, become current and obtain universal acceptance. The account of the pathology of hydatid mole is extremely interesting, and explains many of the more intricate features of the pathology of that disease.

As we have already stated, it is extremely difficult to select sections of a work of this kind; it must be read as a whole, and will amply repay the labour of perusal by anyone interested in the subject. It is an excellent presentation in a truly scientific form of facts hitherto isolated and often exaggerated in description, classifying all the abnormalities described in a coherent and rational manner, and giving the author's deductions from facts observed by himself, or accurately recorded by others, in a manner at once lucid and forcible.

**Biographic Clinics.** By GEORGE M. GOULD, M.D. Vol. III.

Pp. 516. London: Rebman Limited. 1905.

Dr. Gould starts on the assumption that scarcely any recognition is given by physicians, or even by oculists, to the fact that errors of refraction give rise to numerous discomforts, which

might be removed by the application of suitable spectacles ; and if the gravamen were true that the medical profession does not fairly consider the conditions of eye-strain, and their bearings on the treatment of migraine and other numerous discomforts, his book would be of service in drawing attention to the undoubted and well-recognised fact that the correction of astigmatism and of refraction errors is frequently essential for the relief of numerous patients, and very useful in helping many others.

But he seems to assume that he is preaching a new gospel, while on the contrary he is overstating and exaggerating the value of a well recognised and very widely applied form of treatment. He says: "The Continent of Europe still lingers in pitiful barbarism upon this subject. When my patients return from these benighted countries, they tell tales that should be gathered for the amusement of coming and humour-loving generations." "Patients suffering from eye-strain are the prey of the travelling spectacle vendor, who should often be jailed, the quack optician and oculist, the jeweller, who knows nothing of optics or of ophthalmology."

At any rate, there seem numerous efforts being made to apply the remedy which Dr. Gould appears to consider the one panacea for all human illness. But we can assure him that refraction testing is well understood, and is applied with every scientific care by English oculists and by their colleagues throughout the Continent of Europe, and that the book before us is not likely to be of the least service in assisting the investigation of eye-strain from any scientific or clinical or unique standpoint. The book is amusing, and may give hope even to sufferers from incurable maladies, that they may yet be relieved by what is arrogantly called the "new ophthalmology."

No intelligent ophthalmic surgeon will find any help in the book, except to encourage him to plod on with refraction errors, with the certainty that some good will accrue to his patient from the use of spectacles. The nasal surgeon is informed that errors of refraction cause sinus disease. He will naturally retort, and with good reason: "No, it is the sinus disease that caused the eye symptoms, which you will in vain try to relieve by spectacles."

Migraine is no doubt very often due to eye-strain—everyone has known this for many years—and English physicians always send such cases to the oculist before they attempt any treatment by advice or drugs. It is unfair to the practitioner to say that eye-strain is not always sought for as a cause of migraine: it is unfair for any writer of recent years to claim any originality for suggesting the use of glasses in these cases. A narrow specialist, an exaggerator who has become an extremist, has indeed become a hobby rider in the writing of this book (p. 38).

John Addington Symonds is supposed to have suffered from an uncorrected eye-strain, to which alone all his pains and weak-

nesses are attributed ; but there is no positive evidence adduced of any error of refraction or of muscle balance.

Taine's ill-health is attributed by Dr. Gould to a strabismus and ptosis that he suffered from. But there are plenty of squinters and those with paralysed eye muscles who do not suffer on that account from any other defect of health. Eye-strain is often a cause of headache, and may cause other neuroses. But many neuroses exist, and headache may be present, without ocular defects. The first inquiry in migraine should be as to the eye conditions ; but migraine may be present without abnormality of eye, and the correction of eye defect may be quite inoperative against migraine symptoms.

The later chapters in the book are interesting, and show considerable knowledge and investigation. Dr. Gould quotes in support of his views writers of articles chiefly in 1904 and 1903. But as long ago as 1893, an article insisting on the necessity for careful testing of the eyesight and the conditions of the muscle balance in asthenopia and ocular headache, &c., appeared in the *Bristol Medico-Chirurgical Journal*. Writers in this *Journal* have supported the view that careful refraction work and the proper adaptation of glasses is an essential form of medical diagnosis and treatment ; but they do not claim spectacles as an infallible cure for all forms of ill-health.

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**High Frequency Currents.** By H. EVELYN CROOK, M.D., B.S.

Pp. x., 206. London : Baillière, Tindall and Cox. 1907.

There can be no doubt that in certain forms of disease treatment by the high frequency electrical currents is of very great value, and it is in the hope "that it may in some way help to bring before the notice of medical men the undoubted therapeutical value of high frequency currents in certain pathological conditions," that the author submits this book to the medical profession.

The first part of the book is devoted to a description of the production of the currents, and of the various forms of apparatus before the public for the purpose. This description is most thorough, and moreover is given in a most lucid style, the result being that it is one of the most valuable and helpful accounts that we have met with.

The second part is devoted to the consideration of the physiological effects of the currents, in which a very good summary of the work of the best observers—more especially on the continent—is given.

The rest of the book is given up to the consideration of the therapeutical uses of high frequency currents, and it is this part that will probably be of most interest to the practitioner. It mainly consists of reports of cases by various workers, which

prove undoubtedly that in tuberculous disease, rheumatic disease of all kinds, &c., the high frequency currents are of very great value.

This form of electrical treatment has perhaps suffered from too much being expected of it when it was first introduced, and also, perhaps, as is pointed out in the preface, "because it has unfortunately in many instances fallen into the hands of irresponsible and unqualified persons;" nevertheless, it is of the greatest use in certain forms of disease, and such treatises as the one under review, written in a dispassionate and judicial way, will do much to place the treatment on its proper footing in therapeutics.

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**Clinical Studies in the Treatment of the Nutritional Disorders of Infancy.** By RALPH VINCENT, M.D. Pp. 83. London: Baillière, Tindall & Cox. 1906.

This little book is a supplement to the author's *Nutrition of the Infant*, published a couple of years ago, and is a series of clinical reports on infants treated in the Infants' Hospital. The object of the author is to show that slight variations in the percentages of the food stuffs make all the difference in the success or failure of infant feeding, especially in the marasmic; rachitic or otherwise abnormal babies who are brought into hospitals. The cases are rather elaborately reported, and the milk prescriptions given in full. On general principles we are in entire agreement with the author. Careful milk prescriptions either worked out on percentages of the chief constituents or on some other convenient method, are the only means we have of regulating the feeding of infants who cannot be brought up on the breast, and of restoring to health those who have been improperly dieted. The very small variations in diet percentages to which Dr. Vincent attributes so much importance do not appear to us of proved value when judged from the records in this book.

In the first place, the cases are apparently selected, not simply serial, and there is no evidence that if all the infants admitted to the Infants' Hospital were included any better results would be shown than are obtained in other Children's Hospitals, where so much stress is not laid upon minute alterations in diet. Then again, infants, even when carefully fed and looked after, show curious alterations in the rate of growth and general condition apart from small variations in diet. Dr. Vincent's own records show that the children gain and lose weight when the diet is not altered just as they do when it is. Certain comments in the book seem to us of rather doubtful advisability. For instance on p. 40, "In these cases" (presumably in half-starved infants when put on more nourishing diet) "the liver and tissues become engorged; the liver especially comes into a condition of stasis, and the food

then acts as an irritant." The exact meaning of the expression "tissues" is not clear, nor is the evidence of stasis of the liver given; apparently the fact that purgation and reduction of food effects an improvement is regarded as a proof of the correctness of the pathological theory. Again, on p. 14, describing a child who at the age of three months weighed 7 lb. 5 oz., the author remarks that the "nervous condition was due to the terrible deprivation of fat in the previous diet." Doubtless the previous diet had been very deficient in fat, but we are not aware of any evidence to show that deprivation of this food stuff alone induces any special changes in the central nervous system either organic or functional.

With Dr. Vincent's methods in general no fault can be found, and we trust that the Infants' Hospital will continue to do good work in a field where workers are much needed; but we cannot say that we are altogether convinced by the present brochure that all Dr. Vincent's views will stand the test of further experience.

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**Encyclopædia and Dictionary of Medicine and Surgery.** Vols. II., III., IV. Edinburgh: William Green and Sons. 1907.—The succeeding volumes of this great work are following each other without delay. The first volume was noticed in our issue of December, 1906, and three others are now before us, carrying the subject matter to the word Intussusception, and completing more than one-third of the whole work. The four volumes now issued contain almost all of the articles of the first five volumes of the *Encyclopædia Medica*, together with a great mass of new material, consisting for the most part of shorter contributions. The names of the authors are a sufficient indication of the quality of their writings, it would be invidious to select any for especial commendation, and the editorial part of the work is beyond all praise. The numerous cross-references have been prepared with great care, and add much to the value of the work as facilitating immediate reference to all the aspects of any given subject.

**A Dictionary of Medical Diagnosis.** By HARRY LAWRENCE MCKISACK, M.D. Pp. xi., 583. London: Baillière, Tindall & Cox. 1907.—This work is described by its author as a treatise on the signs and symptoms observed in diseased conditions, for the use of medical practitioners and students. It is therefore an exposition of the language of signs as presented in the bodies of our patients. The author endeavours to avoid the discussion of diseases as they are described in the text-books of medicine, and restricts himself to a description of the various signs and symptoms of disease. The dictionary form is convenient for easy reference, but some of the articles are of considerable length, notably that on blood examination, which gives all needful details with regard to the study of stained films, and the determination of the opsonic

power of the serum. The author may well expect to be the teacher over a much wider field than the Royal Victoria Hospital of Belfast.

**On Treatment.** By HARRY CAMPBELL, M.B., B.S. Pp. viii., 421. London: Baillière, Tindall & Cox. 1907.—This is not a text-book, but a series of essays, giving the personal point of view of the author on certain questions of therapeutics. The subjects are very varied, ranging from the education and personality of the physician and his procedure in consultation through a great variety of interesting topics up to the latest fads in diet and therapeutics. From the previous works of the author we should expect a good literary product founded on common sense. We are not disappointed, for the book is full of sound teaching, and is so interesting, that it may well take precedence over the popular novel of the day.

**Gout.** By ARTHUR P. LUFF, M.D. London: Cassell and Co. 1907.—The issue of a third edition of this well-known book shows that gout cannot yet be considered as an extinct disease. In fact, as a source of polemical discussion, it appears likely to afford some interest for another century or two. The enthusiasm for golf and outdoor exercise at one time bid fair to diminish the transmission of this favourite family heirloom, but with the appearance of the motor hopes such as these speedily vanished. Vibration, deficient exercise, increasing appetite, and perpetual faucial dryness all prognose the recurrence of swathed limbs and restrained expressions. Hence it is well to have at hand a summary of recent work. Dr. Luff has considerably enlarged his original monograph, and readers will find a clearly-stated résumé of the present views upon this most difficult subject. It must be admitted that there is still much to be done before the inner metabolic changes in gout are delineated, but it is satisfactory to note that a toxic theory is substituted for the discarded renal theory. Treatment is considered in detail, and a new feature consists of the differential diagnosis in chronic diseases of the joints. There is a very useful table upon the choice of a spa. Bath is recommended as exceedingly good for the absorption of gouty deposits from the joints and tissues. Harrogate is useful for the same purposes, and also for gouty dyspepsia, hepatic symptoms, glycosuria of gouty origin, and gouty skin affections.

**Selected Essays on Syphilis and Small-pox.** Translations and Reprints from Various Sources. Edited by ALFRED E. RUSSELL, M.D. Lond. Pp. xii., 215. London: The New Sydenham Society. 1906.—This volume presents several papers of great interest illustrating the progress of current experimental research. It will be found very convenient for reference to have Schaudinn and Metchnikoff's experimental investigations on syphilis, and the studies of Calkins and Councilman on variola, all work of

extreme importance, gathered together into a well-printed and handy volume.

**The Book of Prescriptions** (BEASLEY). Rewritten by E. W. LUCAS. Eighth Edition. Pp. ix., 366. London: J. & A. Churchill. 1905.—The popularity of this book has called for an eighth edition, and there is now an introduction of two pages in length by Dr. Arthur Latham. Dr. Latham says that the book has been written to assist the senior student in his work at the hospital; if so, the senior student must be careful to distinguish pharmacopœial from other preparations, for there is little or no distinction made for him. Should the senior student look up podophyllin for a prescription to assist him in prescribing that drug in a mixture, he will be disappointed, for the four prescriptions given are all pills, and there is no mention of the ammoniated tincture, nor of a suitable menstruum should the pharmacopœial tincture be used. He will be wise if he refrains from calling sodium tartrate sodii citras (p. 279). He should also refrain from learning certain prescriptions of the blunderbuss type, at any rate before he is qualified, for he will find that a prescription containing over twenty drugs will not be thought highly of by his examiners, even though he plead that it is the "Anti-Cholera Mixture, R.C.P." But he may find, when he is qualified, that it is a useful and up-to-date little book, which will often help him to make a suitable mixture, or remind him of a line of treatment which he had forgotten.

**A Handbook of Medical Jurisprudence and Toxicology.** By WILLIAM A. BREND, M.A., M.B., B.Sc. Pp. xiii., 287. London: Charles Griffin & Company, Limited. 1906.—Though this is a small book on a large subject, it is remarkably complete, and is specially interesting from the large number of recent legal cases which it embodies. We have tested it in numerous places, and find that it is on the whole singularly free from omissions, though, from its compressed style, students would not always see the importance of the facts stated. Still, in the space which the author has allowed himself, he writes clearly and with vigour, so that his pages are by no means unattractive, even apart from the cases he cites or describes from his own experience. We shall hope to see an expanded edition later on, which should be an invaluable book. The various chapters are of unequal value. In the treatment of opium-poisoning there is no clear statement of the curious excretion into the stomach of opium or morphine circulating in the blood, which can be removed by repeated lavage with permanganate after an interval. Even morphine injected hypodermically can be thus recovered. Similarly in the treatment of poisoning by arsenic, the quantities of sodium carbonate and perchloride of iron to be used for forming ferric hydrate might have been given in detail. The tests for phos-



phorus are restricted to Mitscherlich's method, and the dangers of phosphuretted hydrogen are omitted altogether. We should also like to have seen some reference to the much debated precautions ordered by the Home Office as to the glazing of pottery, and finally confirmed under the arbitration of Lord James of Hereford. In fact, the account of several of the important poisons is far too sketchy and brief. A much better chapter, and one of general interest, is the one on "the obligations statutory and moral of the medical man." The law on malpraxis, professional secrecy, undue influence, and death certificates is here explained better than in most treatises of the kind. Indeed, we know of none which sets forth so many recent decisions of importance to the practitioner. Hutchison's useful list of the ingredients of the common patent medicines, such as Cockle's pills and pink pills, is given in an appendix. The book is well printed in clear small type on good thin paper.

**Medical Diagnosis.** By J. J. GRAHAM BROWN, M.D., and W. T. RITCHIE, M.D. Fifth Edition. Pp. xvi., 508. Edinburgh: Wm. Green and Sons. 1906.—The success that this book has obtained is well deserved, and the appearance of the fifth edition is sufficient evidence of its popularity. It is hardly necessary to say more than that this edition has been brought thoroughly up to date, and may be relied upon as a trustworthy and complete handbook for ordinary clinical work. It is profusely illustrated, and the illustrations are good. The additions made add greatly to its value. To those who know the book no further commendation is necessary, but we may add that its convenient size is not the least of its recommendations.

**Elements of Practical Medicine.** By ALFRED H. CARTER, M.D. Ninth Edition. Pp. xvi., 614. London: H. K. Lewis. 1906.—A ninth edition is its own commendation: the book has fully shown its adaptation to the needs of the student of medicine. It has been carefully revised, and has not grown much larger. The very full therapeutic index appears to be needful in these days, when the tendency is to accept the ready-made combinations of the wholesale druggist rather than to devise whatever may be appropriate to the case and the occasion.

**The Etiology and Diagnosis of Epidemic Cerebro-Spinal Meningitis.** By ARCHIBALD WILLIAM TAVES, M.D. Pp. 42. Providence, R.I.: Snow & Farnham. 1906.—This essay won the prize awarded by the Trustees of the Fiske Fund at the annual meeting of the Rhode Island Medical Society in 1906. Its motto, "Keep Watch," is a very appropriate one, inasmuch as epidemics of this disease and sporadic cases also crop up unexpectedly here and there, and diagnosis is difficult until a bacteriological examination of the fluid obtained by lumbar puncture has been made.

**The British Journal of Tuberculosis.** Edited by T. N. KELYNACK, M.D. Vol. I., No. I. January, 1907. London: Baillière, Tindall and Cox.—Another journal has been established in furtherance of the crusade against tuberculosis. This, its first number, contains a series of papers by the best-known writers and authorities. We are told that “the time seems ripe for a great forward movement against tuberculosis . . . and that here, as in other spheres, the future belongs to the brave.” We trust that the editor will have such support as will enable him to carry on the campaign with the same energy and success as are shown by the January number, which should be read by all who take any interest in the attempt to combat tubercular diseases.

**The Sigmoidoscope.** By P. LOCKHART MUMMERY, B.C. Cantab. Pp. 88. London: Baillière, Tindall & Cox. 1906.—This is an elementary treatise based upon the author's experience of his modification of Prof. Strauss's electric sigmoidoscope: the first half of which describes the methods of using the instrument, and the second half deals with some of the appearances met with. There appears to be a limited future for this method of diagnosis of diseases of the lower bowel which cannot be adequately discovered by other means, and the assistance of simultaneous air-inflation has diminished the dangers of sigmoidoscopy, and increased its possibilities. At the same time, surgeons of experience are well aware of the dangers attending the passage of long rigid instruments through the rectum by the inexperienced. The author records a case of perforation of the bowel into the peritoneum by the sigmoidoscope, although he says “the only danger which it seems to me might attend the use of the sigmoidoscope is that of tearing the mesentery of the sigmoid.” It is doubtless an instrument of precision, essential in some cases to accurate diagnosis; but we predict that the average man will do wisely by leaving such examinations to those specially experienced, lest he be tempted to pass the sigmoidoscope as he might a bougie, with results disastrous to his patient and distressing to himself.

**Philadelphia Hospital Reports.** Vol. VI. Philadelphia: Bradley Printing Co. 1905.—The first paper is one of local interest, dealing with the first clinical reports issued by the Philadelphia Hospital. The other papers deal with various clinical subjects in reference to cases in the Hospital; and we are only doing justice to these papers when we say that they maintain a remarkably high standard, and will well repay perusal. The neurological articles perhaps especially deserve mention.

**Manual of Surgery.** By ALEXIS THOMSON and ALEXANDER MILES. Second Edition. Vol. I. Pp. xxi., 808. Edinburgh: Young J. Pentland. 1906.—The appearance of the second

edition of this book in a little over two years testifies to its popularity. The first volume has been increased in size by forty odd pages. Some of the sections have been re-written, some of the old illustrations replaced by better ones, and some additional ones added. Specially is this noticeable in the orthopædic section at the end of the book. Also new are the photo-micrographs illustrating surgical bacteriology. These alterations and additions have added to the value of the work, which we still consider the best modern text-book on surgery for students.

**Glimpses of American Surgery in 1906.** By C. HAMILTON WHITEFORD. Pp. 63. London: Harrison and Sons. 1906.—This is quite an interesting booklet. In simple style we are told the impressions of the author at several of the American surgical clinics, notably of the Mayo Brothers, of Rochester, Minn.; of Murphy and Ochsner, of Chicago. The individuality of the various surgeons is nicely caught, and though we have heard a good many of the little trite sayings from the same mouths before, yet they will be new, interesting and often amusing to the profession in England.

**Spinal Curvatures.** By HEATHER BIGG. Pp. viii., 240. London: J. & A. Churchill. 1905.—This book has been written to advocate the mechanical as opposed to the gymnastic treatment of scoliosis. The author not only recommends a support for very advanced cases in which little good can be expected from exercises for the spine, and for which most surgeons would recommend one, but for all cases, at every stage of deformity. The general opinion of surgeons at the present time is that such mechanical supports have no curative action, but prevent further deformity, relieve pain, and should only be used for cases too severe for other methods of treatment. Heather Bigg, on the other hand, maintains that such mechanical support is curative, and he does not employ exercises to strengthen the spinal muscles, but applies an instrument to support the thorax on the pelvis, which is constantly worn in the day-time. We do not believe that any form of such an apparatus can mould the deformed spine straighter, but we do think that if the spine is supported in this way *during its period of growth* it may in time grow straight, or straighter, just as a bent tibia may when further bending is prevented by a suitable splint. We are therefore inclined to attach more importance to a supporting apparatus in the treatment of scoliosis than many surgeons, but we do not think that it should replace all other methods in cases which are not too advanced to be likely to derive benefit from them, and in which there is no marked change in the shape of the bodies of the vertebræ. Mr. Heather Bigg strongly objects to the gymnastic method as advocated by Mr. Bernard Roth and others, and he devotes a chapter to the consideration of Mr. Roth's

treatment ; but we cannot say that he shows that the gymnastic treatment is valueless, though perhaps some surgeons have gone too far in denouncing the mechanical support. At any rate, it is interesting to read this original and well-written little book by Heather Bigg, and consider both sides of the question. The author goes very fully into the history of the treatment of scoliosis, and there are many good illustrations of cases and instruments in the book.

**Grundriss der Orthopädischen Chirurgie.** By Dr. MAX DAVID. Second Edition. Pp. v., 240. Berlin : S. Karger. 1906.—The first edition was published in 1900. The present one is considerably enlarged. It is essentially a practical work, most of the text being devoted to descriptions of the various deformities, and to carefully-described details of their treatment. The etiology and pathology are somewhat curtailed. The illustrations, although not of great artistic merit, serve well their purpose, and are very numerous. The authors quoted are for the most part German and Austrian, and comprise a very good selection. Compared with English surgeons, there is much more value attached to gradual reductions and forcible wrenchings of deformities, and also a greater use of plaster of Paris. The descriptions of the many complicated instruments with the aid of diagrams is clear and convincing ; these, especially in the cure of fixed joints, are much more used abroad than with us. The importance also of massage is not exaggerated. It is a work which would well repay translation, and be of considerable use to practitioners in England.

**The Sequelæ of Gonorrhœa in both sexes.** By W. LOUIS CHAPMAN, M.D. Pp. 117. Providence : Snow and Farnham. 1905.—A prize was awarded to the author for this essay by the Trustees of the Fiske Fund, Providence. As stated in the preface, it is largely a work of compilation of the most recently acquired knowledge on the subject plus investigation on the part of the author in some original directions. It deals very fully with the subject embraced. Commencing with the bacteriology, and showing that a gonotoxin may produce the symptoms apart from the actual organisms, a chapter is devoted to the mechanism of gonorrhœa and the importance of latent gonorrhœa. In dealing with the sequelæ common to both sexes, of special interest perhaps are the stomatitis of new-born infants, the various skin invasions, which may be of the nature of eczema, herpes, urticaria, &c., and the affections of the nervous system, neuritis, &c. In the sequelæ peculiar to the male, attention is paid to the part played by the prostate, and the possibility of gonorrhœal affection of that organ being a precursor to the enlargement of old age ; and in those peculiar to the female, peritonitis and the effect of gonorrhœa in producing sterility are the most noticeable sections. Treatment is entirely omitted.

**Women's Health, and How to take care of it.** By FLORENCE STACPOOLE. Second Edition. Pp. viii., 165. Bristol: John Wright & Co. 1906.—This treatise is the outcome of much thoughtful experience in nursing the ailments peculiar to women, and is written in a plain, clear style that befits the subject. It may be warmly recommended to women who wish to know how to preserve their health, or to take care of the health of girls under their care. It will be specially useful to young women who have to live in lonely and distant parts of the world. The medical information is cleverly reproduced, but the distinction between anemia and chlorosis is not clearly put. A particular excellence of the book is the appeal not to neglect the early symptoms—duly set forth—which may announce cancer of the uterus. We like the chapter on the climacteric period, and especially the advice as to diet; but a few persons stint themselves too much to maintain an unnatural slimness. There is perhaps rather much prescribing, especially of iron, which should *never* be taken except under medical advice; but probably nurses only will understand how to make use of the prescriptions. The book may be read with advantage by young medical practitioners.

**Medical Electricity.** By H. LEWIS JONES, M.A., M.D. Fifth Edition. Pp. xv., 519. London: H. K. Lewis. 1906.—Dr. Lewis Jones has added to the usefulness of his handbook by bringing it up to date. The author, himself a pioneer in the electrical world, gives what is best in the new work, and records new methods of usefulness for the old. The chapter on X-rays has been largely extended, and the electrical methods of dealing with various skin diseases also find a place. The experiments of Leduc in electrolysis are quoted, and a very useful addition to that subject is made in this present edition. Dr. Jones has been paying personal attention to the subject of introducing drugs into the body locally by electrolysis, and as much interest has been stimulated recently by the remarkable results obtainable in rodent ulcer by the introduction of the ions of zinc, it is valuable to have a treatise of reference for details of the technique. The handbook is so well supplied with illustrations, and the descriptions of apparatus, &c., are so easily followed, that we have no hesitation in recommending this book to any who wish to obtain some knowledge of the rapidly-extending subject of medical electricity.

**Climatotherapy and Balneotherapy.** By Sir HERMANN WEBER, M.D., and F. PARKES WEBER, M.D. Pp. 833. London: Smith, Elder & Co. 1907.—This volume on the climates and mineral water health resorts (spas) of Europe and North Africa, including the general principles of climatotherapy and balneotherapy, and hints as to the employment of various physical and dietetic methods, is practically a third edition of Sir H. Weber's book

on the *Mineral Waters and Health Resorts of Europe*, but much enlarged in respect to medical climatology. Questions of climate and baths become of increasing importance as the facilities for rapid and easy travel annually increase, and books of this kind are soon out of date. Accordingly, we may welcome this volume as a very comprehensive summary of everything known on the subject, and giving the views of those whose experience must command universal regard. We cannot attempt a review of a book like this. It should be on the table for constant reference.

**The Röntgen Rays in the Diagnosis of Diseases of the Chest.** By HUGH WALSHAM, M.A., M.D., and G. HARRISON ORTON, M.A., M.D. Pp. 80. London: H. K. Lewis. 1906.—Dr. Walsham is well known as one of the pioneers in this country in applying the X-rays to the diagnosis of chest disease, and, in conjunction with Dr. Orton, he has given us this small volume, in which his experience is summarised. The use of the rays for diagnosing intra-thoracic disease is becoming much more general than it was, but the profession at large is still unaware to a great extent of its great value in diagnosis; and the authors have done well in drawing attention to this by saying that although it is now ten years since attention was drawn to the subject, "yet to-day the mass of practitioners in this country are quite ignorant of the value of the rays in the diagnosis of chest diseases." This little book ought to have a wide circulation, and will go far to remove this want of knowledge, which is much to be deplored. The value of the rays in diagnosing early phthisis is now generally admitted, and the chapter on this subject is one of the best in the book. The importance of the symptom of impaired movement of the diaphragm as seen on the fluorescent screen, which in many cases is present before any physical signs can be made out is rightly insisted on; and by skiagraphy it can often be demonstrated that disease has attacked both lungs, where only one shows signs of disease by physical signs. A number of cases illustrating these and other conditions are given. In the chapter on thoracic aneurism the difficulty and often the impossibility of diagnosis is pointed out; by means of skiagraphy, however, a correct diagnosis can practically always be made, the authors pointing out that to ensure a correct diagnosis the fluorescent screen must be used and the thorax skiagraphed in more than one position. This chapter, too, contains the records of interesting cases of aneurism thus diagnosed. This charmingly written little book is one of the most important contributions to the literature of skiagraphy that has appeared of late, and is cordially to be recommended to the notice both of X-ray workers—for the useful hints as to technique which it contains—and also to all members of the profession, as it points out to them the great assistance that they will receive from skiagraphy in all chest diseases, especially in those which are more or less

obscure. It should be mentioned that the excellent reproductions of skiagrams, which elucidate the text, are quite one of the features of the book.

**Lessons on Massage.** By MARGARET D. PALMER. Third Edition. Pp. xvi., 272. London: Baillière, Tindall and Cox. 1907.—This book has had a large circulation, and several new chapters have been added in this edition. It is an instruction on the methods of massage; the elementary anatomy and physiology necessary for this is also included. As such it is clearly and concisely written, and easily understood by nurses, for whom it is especially meant. It does not pretend to advise as to which cases should have massage, or to discuss the reasons why the movements bring about the required results. Many conditions which are greatly benefited by this treatment are not even mentioned, and as it is no part of the trained masseuse to know them, it is probably wise that they have been omitted. One point insisted on is very important, namely the great advantage of working without lubricant or powder where possible. It would add to the utility of the work if some diagrams were introduced showing the direction and extent, by means of arrowed lines, of the various excursions made by the hands. Swedish movements are not dealt with, though these, and especially the respiratory exercises, ought to be known to every masseuse. The book just covers what is required in the examination of the Incorporated Society of Trained Masseuses.

**Lectures on Massage and Electricity in the Treatment of Disease.** By THOMAS STRETCH DOWSE, M.D. Sixth Edition. Pp. xii., 447. Bristol: J. Wright & Co. 1906.—We have been frequently called upon to review this book, and the sixth edition has not grown larger than the fourth. The author directs attention to the great and increasing appreciation of the value of massage as a remedial agent. His book has done much to bring about this result, but he regrets that the long-continued resistance to massage in this country has led to much abuse of this method in unqualified hands—"a good masseur should possess skill, intellect and judgment; but, above all, he must be a good manipulator." A close study of this book cannot fail to be of great value, both to those who prescribe and who perform massage and use electrical methods of treatment.

**The Uses of X-rays in General Practice.** By R. HIGHAM COOPER. Pp. x., 98. London: Baillière, Tindall and Cox. 1906.—**X-rays in General Practice.** By A. E. WALTER, Captain I.M.S. Pp. xii., 175. London: John Lane. 1906.—To quote the preface of the first of these books, "the intention of this little book is that of giving the general practitioner some idea of the help he may get in his practice from the use of the X-rays," and admirably it fulfils its object. It is quite a pleasure to come across a book so

absolutely devoid of "padding," and to have a plain and straightforward account of the author's own method of work, and his experience of the use of the X-rays, both in diagnosis and treatment. After a masterly short summary of the physics of the X-ray, the author goes on to give in a most lucid way directions for working an induction coil with an improved pattern of the ordinary platinum break, wisely referring the reader to larger works on the subject for details of the more elaborate breaks which may be beyond the reach of the ordinary practitioner; and then proceeds to discuss the use of the rays in diagnosis and treatment. In the former most practical directions are given for taking skiagrams, such as the position of the tube as regards the part that is to be skiagraphed, length of exposure required, &c., &c., and in the latter the author confines himself entirely to a record of his own work, and gives the results of his own personal experience in the treatment of the various diseases in which the X-ray is used as a method of treatment. We can cordially recommend this little manual to all X-ray workers, not only to the novice, but also to the more advanced worker, who will find in its short 88 pages more that will be of practical use to them than in many volumes of much more pretentious size.

The second of these books is addressed to "the general practitioner, the student, and other non-experts in the X-rays." Like many other books on the subject now before the medical public, it gives advice as to choice of apparatus, how to set about taking a skiagram, &c.; but perhaps the most interesting part of the book is the account the author gives of the equipment he has devised for active service in the field. There are a number of most excellent illustrations; the one facing the title-page of a Chinese woman's foot, and of the skiagram of the same later on, are of special interest because of the difficulty in obtaining them, owing to its being "considered an act of the utmost indelicacy" for a Chinese woman to expose her foot. To the lover of personal detail, it may be of interest to have reproduced for his benefit the actual lesion which occurred when Lord Kitchener broke his leg—an ordinary fracture of the tibia and fibula. (We wonder whether Lord K. would be equally pleased?) But we do take exception to the statement on page 99: "His Excellency Lord Kitchener suffered a good deal when he first began to get about," and "he had a three weeks' course of high-frequency treatment, and I have his authority for saying that he was much benefitted thereby." This savours much more of the "Electro-pathic Institute" advertisement than of one of the volumes of the *Practitioner's Handbooks Series*.

**Transactions of the Epidemiological Society of London.** New Series. Vol. XXIV. Session 1904—1905. London: Williams and Norgate. 1905.—Amongst the interesting series of papers in this volume, probably the keenest interest will be felt in Prof.



MacWeeney's contribution, "On the Relation of the Parasitic Protozoa to each other and to Human Disease," and in Dr. Nuttall's "Ticks and Tick-transmitted Disease," which deal with a subject that is now undergoing very rapid growth as knowledge accumulates. Other subjects dealt with in this volume are "Ankylostomiasis," "The Etiology of Rheumatic Fever," "Phthisis Rates," "The Spread of Small-pox occasioned by Small-pox Hospitals," and the President (Dr. Whitelegge, C.B.) contributes a paper on "The Epidemiological Aspects of Industrial Disease."

**Reports of the Society for the Study of Disease in Children.** Vol. VI. Session 1905—1906. London: J. and A. Churchill.—The sixth volume of the reports of this young and vigorous Society fully maintains the high standard of excellence established by the preceding volumes. Dr. Whipham reports a case of splenic anæmia, which illustrates the difficulties of the anæmias of children when the splenic group is involved. Mr. Mackintosh contributes a common-sense paper on diet during the second year of life. We are surprised that a Society devoted to the study of disease in children does not pay more attention to the important question of feeding. The December meeting is occupied with a full-dress debate on "Pleural effusions, serous and purulent," which, owing to the eminence of the various speakers engaged, may be regarded as a succinct summary of our present knowledge of the subject. The Wightman Lecture was delivered by M. Broca, M.D., of Paris, who took for his subject "Appendicitis: acute and chronic." Dr. Bertram Rogers describes a case of acute atrophy of the liver. In a valuable paper on "Enlarged Veins in Children," Dr. A. G. Gibson points out the importance of enlarged veins on the thorax, in the diagnosis of enlarged tubercular mediastinal glands in children, when associated with other symptoms.

**Index-Catalogue of the Library of the Surgeon-General's Office, United States Army.** Second Series. Vol. XI.—Mo-Nyström. Pp. 858. Washington: Government Printing Office, 1906.—This volume includes 8,023 author-titles, 5,634 subject-titles of separate books and pamphlets, and 34,211 titles of articles in periodicals. It may help the uninitiated to form some idea of the immense amount of labour bestowed on the preparation of this invaluable work if we mention that under the headings of "Nerve," "Nerves," and "Nervous" there are about 155 pages of closely-printed references.

**Wellcome's Photographic Exposure Record and Diary, 1907.** London: Burroughs, Wellcome & Co. Pp. 268.—This popular pocket book has undergone its annual revision, and its information brought up to date. The simplicity and convenience of

the mechanical calculator and light tables render the estimation of the correct exposure for any subject an easy matter. It is an excellent handbook for photographers generally.

**The Influence of Cod Liver Oil on Tuberculosis.** By J. W. WELLS, M.D., D.P.H. Pp. 83. Manchester: The University Press. 1907.—Cod Liver Oil has for many years been looked upon as a most useful agent in the treatment of consumption. Of late it has been falling into disrepute, as it commonly forms no part of the programme of sanatorium treatment. The experiments recorded in this booklet, conducted in the Public Health Laboratory of the University of Manchester under the supervision of Professor Sheridan Delépine, tend to show that "pigs affected with tuberculosis continued to increase rapidly in weight, and appeared quite comfortable and happy for a long period when the Cod-liver Oil Emulsion was added to the usual diet. Their tubercle lesions showed signs of possible recovery, tuberculous glands became fibrous and calcified, and the tubercle bacilli more difficult to demonstrate." With this evidence before us, we may well ask whether the use of Cod Liver Oil in the treatment of phthisis should be discontinued.

**Guy's Hospital Reports.** Vol. LX. London: J. and A. Churchill. 1906.—The present volume opens with a valuable paper, by Dr. Frederick Taylor, on "The Chronic Relapsing Pyrexia of Hodgkin's Disease," in which he records nine cases where this disease was accompanied by relapsing pyrexia. He points out that the temperature may be continuously high for long periods, and that periods of higher fever may then alternate with periods of lower fever, and that the recognition of the relapsing form of pyrexia may be of assistance in the diagnosis of some doubtful cases. Dr. Herbert French and Mr. H. T. Hicks write on "Mitral Stenosis and Pregnancy," presenting in tabular form statistics of 300 consecutive cases of mitral stenosis in women over twenty who have been in Guy's Hospital. They consider that the dangers of pregnancy in these cases have been overstated, and that it is not just to negative marriage in all women with mitral stenosis. Two highly interesting lectures, delivered at the Physiological Laboratory, Guy's Hospital, by Dr. J. S. Haldane—a brother of the present War Minister—on "Life and Mechanism," are here published. Dr. Haldane considers that while the old vitalistic working hypothesis in physiology was altogether unsatisfactory, the mechanistic hypothesis which some fifty years ago replaced it, is inconsistent with observed phenomena, and must also be rejected. In biology we cannot get beyond the fundamental working conception of the living organism, which is an organism, and not a machine. The lectures are expressed in admirable language, and are worthy of thoughtful study. We have no space to notice the other articles in this volume, which are of unusual importance and interest.

## Editorial Notes.

THE accompanying advertisement  
**Bristol Royal Infirmary :** in the daily papers recites new rules  
**New Rules proposed.** to be proposed at the next meeting  
of the Board of Governors :—

### BRISTOL ROYAL INFIRMARY.

THE GOVERNORS are requested to attend the HALF-YEARLY MEETING of the BOARD, to be held in the BOARD-ROOM on TUESDAY, 24th September, 1907, at 12 Noon.

The following alteration to the Rules will be proposed :—

“ THAT all appointments to the Honorary Staff  
“ to be made subsequent to the passing of this  
“ Rule shall be held subject to the following regu-  
“ lations, in lieu of those contained in Rule 35.

“ RULE 36.—No member of the Honorary Staff  
“ shall hold any Union or Club appointment. No  
“ member of the full Staff shall hold any other profes-  
“ sional public appointment other than Professorship  
“ or Lectureship at any University, College, or  
“ School. No member of the Assistant Staff shall  
“ hold any other General Hospital appointment, nor  
“ more than one special Hospital appointment.

“ That the full Physicians shall limit their  
“ practice to medical work. That the full Surgeons  
“ shall limit their practice to surgical work. That  
“ each of the Specialists shall limit his practice  
“ to his speciality.”

\* \* \* \*

16th September, 1907.

Not far short of two hundred years ago—in 1735—the Bristol Royal Infirmary was founded by the happy association of lay and medical philanthropists, and the partnership thus constituted in “ Charity Universal,” the motto inscribed over the main entrance to our oldest hospital, remains to this day the dominant spirit controlling numberless hospitals that have followed in the wake of this almost the first of provincial English hospitals.

Such a partnership must not be confused with a commercial union, for, unlike business connections, the end and aim of both medical and lay partners has not been simply self advancement, but relief to the suffering and the advancement of medicine.

At a time when anything in the nature of prestige attaching to a hospital had yet to be created, the profession of medicine

gave its best, and then, as now, no new discovery or advancement could be kept a trade secret for the aggrandisement of the discoverer, all being thrown into the common store of knowledge, so that rich and poor alike should derive the utmost benefit possible. Hence the prestige of hospitals grew apace, and lay philanthropists nobly responded to the ever-increasing call for new and better hospitals, that cover the land in every civilised community. Have medical men ever lagged in fulfilling their share in the partnership ?

Hospital doctors, and the general practitioners alike, have lessened, to their own disadvantage, the toll that disease levies, and the general public little know the constant charity of even the poorest of general practitioners, any more than they will ever know the measure of professional charity outside any hospital walls of such men as Swayne, Long Fox, and Markham Skerritt, whom we have so recently lost. These names, and such men as Budd, Symonds, Augustin Prichard and Greig Smith, and countless predecessors in medicine and surgery, have raised the prestige of our Bristol hospitals, as other physicians and surgeons have done elsewhere, and in so doing, apart from their gift in the work done, have also directly aided in securing financial support for the buildings and endowments: they gave a full measure and running over.

The governors to-day have inherited those buildings and endowments, and the doctors have inherited the prestige. Each is a precious heritage—the one from the laymen, and the other from the doctors—to their respective successors and sons, and we think we may fairly say that the representatives of each are successfully maintaining and adding to their legacies, held in trust for the Bristol poor. We have already, in our former note, pointed out that this prestige is much overrated. Hospital appointments are of little value in themselves, except in so far as they are opportunities for doing good work; and anyone holding such appointments, and only doing as little as any number of rules may demand, but failing to maintain the prestige by enthusiastic devotion to the work he takes in hand, finds the prestige is a tinkling cymbal. Are these easily-satisfied energies

what our hospitals want? Are these the kind of men that have placed our British hospitals in the position they now occupy, or who can hope in future to command the respect of their medical brethren? No, it is the man who takes infinite pains over details, who is untiring in his search for knowledge, and who is ready to go far afield in its pursuit, filling up spare hours where opportunities arise.

In our last issue we referred to the question of dual appointments, because the committee of the Bristol General Hospital had made "vexatious" use of their rule requiring the sanction of the committee before any member of their honorary staff accepted an appointment at any other hospital. The comedy of a number of merchants, tradesmen, parsons and ministers, stockbrokers and lawyers, having the right to decide how a physician or surgeon may employ his spare time does not strike these good and worthy gentlemen; but as the case in question was settled by the surgeon refusing to be bound by the veto so arbitrarily exercised, we can cordially congratulate that committee on rescinding their ruling; yet how far better would it be if they rescinded the derogatory rule.

Unfortunately it is this rule and ruling that has aroused the committee of the Royal Infirmary, for during its two centuries of existence such arbitrary powers over the medical staff have never been constituted, and the staff would not willingly subscribe to such an "Act of Supremacy." But how much more arbitrary, though perhaps less derogatory, are the new rules sought to be imposed at the Royal Infirmary, since in future any physician or surgeon or specialist who seeks election is forbidden to accept any other public medical appointment—except a lectureship—whether it be a paid office or an exercise of charity! Inasmuch as custom has determined that the staff at representative teaching hospitals practise as pure physicians and surgeons respectively, and provided the age limit at the Bristol Royal Infirmary is raised to the usual 60th year, we see nothing to complain of in this custom being made a rule, not only because it is due to the medical profession and to general practitioners in particular that those of their

number who accept such opportunities should use them to the highest interests and for the advance of medicine, but because the governors of a hospital have as much right to demand that their physicians or surgeons shall be pure physicians or surgeons, as they have to insist on their having certain degrees or diplomas ; and they fail to do their duty if they do not get the best possible skill for their patients. But by what right do the committee or governors of the Royal Infirmary presume to dictate to their honorary physicians or surgeons how they shall occupy their life apart from their duties to the Bristol Royal Infirmary ?

The living governors and their lay committee have neither built nor endowed the institution, and are mainly the inheritors of the generosity of bygone ages, to which they add their quota. So with the medical staff. Here, as elsewhere, they have not made the prestige of the Royal Infirmary ; they inherit it from their medical forefathers, but they, too, add their quota to the good repute. The governors inherit the buildings and endowment, and it is theirs to maintain ; but so, too, the medical profession inherit the medical prestige, and that is theirs to maintain. But, alas ! and here is the pity, the lay governor, realising that there is a prestige attaching to his hospital, considers it is his to manipulate even to the detriment of the medical staff. If you serve our institution, they say, you must have your charitable wings clipped and go lame. You medical men have duties to perform in our hospital, and it is not enough that these are faithfully and honourably discharged. It is not enough that your forefathers have so raised the prestige of our hospital that we can, and do, insist on your having the highest qualifications, and practising as pure physicians, surgeons and specialists—that you have suggested yourselves because it appeared a real advantage to the institution—but notwithstanding this we compel you, whether you like it or not, to accept terms which are vexatious, if not derogatory, by binding you to forego any other charitable effort, or to accept even any remunerated office usually held by consultants. In your young years you may waste your spare time in any way you wish, but one thing you shall not do. You shall not, in your keen love of your

profession, serve another hospital, to gain experience outside our walls, that you may become better physicians or surgeons.

What should we say of the new landlord whose estate, inherited from his forefathers, had been tilled and improved and continuously raised in value by the labours of the tenant through many generations of father and son, if he turned round on his tenant saying, The loyal and devoted labour of your forefathers has increased the value and status of the tenancy ; what they gave so willingly, and in good faith, I will use to make hard conditions for you ; if you don't like them, well, you have your remedy—you can turn out ? Is this Charity Universal ?

We do not suppose for a moment that the generous and honourable laymen of our hospitals are capable of deliberately injuring or slighting their staff. It must surely be misconception only that induces them thus to forget what they owe to the medical profession, for medical science is undivided, and is not only national, it is international. If the medical work at British hospitals is to be honorary, let it be continued as the charity of the whole medical profession ; otherwise it should be treated on true business lines, and duly paid for like the buildings, food and nursing. Let us wake up, and see that the laymen do not exploit the profession, and ruin our work with their so-called "business principles." The blow is none the less hurtful because it is dealt by friends.

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**John Free.** ABOUT forty years before the departure of Cabot on his voyage across the western ocean, another less-noted but sufficiently important enterprise had been embarked upon by a pioneer of medical learning in Bristol. Attracted, doubtless, by the reports of a revival of learning in the Universities of Northern Italy, John Free, with a few fellow-students, accepted the offer of an Italian shipmaster to sail from the port of Bristol to ascertain at first hand what new secrets of science the Italian professors had to impart. Already Mondini and his successor, Bertrucci (Guy de Chauliac's master), had instituted

on a firm foundation the study of anatomy at Bologna, and more than a century had passed since Mondini's first public demonstration of a human dissection. In France a papal bull had been issued, permitting dissection of the human body in the University of Montpellier, but to England, engaged on the great wars with France of Henry V. and VI., these advances in science had not yet been introduced, though no doubt the intercourse of French and English surgeons in the English army had aroused some curiosity among English savants to go and see for themselves what this strange way of studying the human frame might be; for Galen and his satellite commentators reigned supreme in medicine still after the lapse of thirteen centuries.

In 1449 Gilbert Kymer, who had been Rector of the Faculty of Physicians in London when the abortive Conjoint College of Physicians and Surgeons was set up (1423), admitted, in his capacity as Chancellor of the University of Oxford, a certain John Free, of Balliol College, to the degree of B.A., who in 1454 proceeded as M.A., and ultimately became a Fellow of his College. As usual in those days, Free subsequently took Orders in the Church, and although it is not known that he had any previous connection with this city (for he had been born in London), he shortly came to Bristol and became Rector of St. Michael's *in monte* (on the hill where it stands to this day). Of his life in Bristol there is no record, but he had by then acquired something of the reputation for culture and learning of which Leland speaks with such admiration. Eventually, with three or four friends stimulated by the same greed of knowledge, he found in Bristol an Italian ship on which they took passage to the country where the liberal arts had so recently revived. Pits states (overlooking perhaps his connection with St. Michael's) that "at length upon quitting Oxford he resorted to Venta Belgarum, that is Bristol, not for the purpose of remaining there, but in order thence to take shipping for foreign parts, for his great desire was to visit Italy, which he accordingly did."

Free (or Phreas as he was called in Italy, according to the custom of latinising the names of foreigners) studied at the



Universities of Ferrara, Florence and Padua, and settled as a teacher of medicine in the first-named. His writings against Diodorus Siculus gained for him the gratitude of the Pope (Pius II.), who, wishing to reward his orthodoxy by some special mark of favour, appointed him Bishop of Bath, which See had just then fallen vacant. To this office he was never actually consecrated, for he fell ill and died in 1465 before he could return to England, poisoned, it was hinted, by those whose interest it was that the bishopric should be otherwise bestowed.

The importance to medicine of this venture from Bristol can scarcely be overestimated; a rapid succession of students followed in Free's footsteps. England was participating in that intellectual intercourse with the centres of European learning which culminated in the invitation of Erasmus to be Professor of Greek in Cambridge, and the appointment of John Caius as Professor of Greek in Padua, whence he returned to organise the scientific study of medicine in England.

Never before or since did England occupy so high a position in the republic of learning, and Bristol may recall with justifiable pride that it was from our port that John Free set out "*qui primus Anglorum erat, qui propulsâ barbarie, patriam honesto labore bonis literis restituit,*" and that he set the example followed by such masters of science as Linacre and Caius, Harvey, Locke and Sydenham.

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## Notes on Preparations for the Sick.

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**"Elixoid" Formates Compound.**—BURROUGHS, WELLCOME & Co., London.—Each fluid ounce contains:—

Calcium Formate, gr. 12 (0.778 grm.).

Sodium Formate, gr. 6 (0.389 grm.).

Magnesium Formate, gr. 6 (0.389 grm.).

It is claimed that the formates possess marked antiseptic and diuretic properties. "Elixoid" Formates Compound presents a convenient and palatable means of administering the formates of calcium, sodium and magnesium without causing gastric disturbance. Two fluid drachms may be taken thrice daily, in water, after food.

**Quinine Acetyl-Salicylate.**—BURROUGHS, WELLCOME & Co., London.—This is another recent preparation brought out by Messrs. Burroughs and Wellcome, and it is likely to be appreciated by the medical profession.

Acetyl-salicylic acid, or "aspirin," has given satisfactory results in cases where the use of salicylates was deemed necessary, and the combination of this acid with quinine should certainly give results justifying its introduction. No doubt it would be hydrolysed in the duodenum with liberation of quinine and salts of acetic and salicylic acids, and it is thought by some pharmacologists that better results are obtained when active products are thus liberated by hydrolysis within the system, than when they are directly administered.

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**Tabloids.**—BURROUGHS, WELLCOME & Co., London.—**Gingamint**: soda-mint compound.—Each contains sodium bicarbonate, gr. v.; ammonium bicarbonate, gr.  $\frac{1}{2}$ ; with gingamint, saccharine and oil of peppermint. This preparation is a valuable antacid and stomachic, employed in the relief of dyspepsia, nausea, heartburn and flatulence. It promotes appetite and digestion, relieves griping, and produces a diffusible stimulant effect.

**Slippery Elm.**—Mucilage of slippery elm is largely used as a demulcent and sedative astringent. Alone, or combined with phenol, it is employed locally in pharyngitis and other throat affections, and internally in diarrhoea and dysentery. The mucilage is also stated to have a nutritive value. "Tabloid" Slippery Elm presents a convenient and reliable means of administration. Each represents gr. v. (0.324 gm.) of mucilage of slippery elm, and one may be slowly dissolved in the mouth or swallowed whole with water as required.

"**Tabloid**" **Carbolic Acid and Slippery Elm.**—Each contains carbolic acid, gr.  $\frac{1}{2}$  (0.032 gm.). One may be slowly dissolved in the mouth, or one to two swallowed whole with water twice or thrice daily after food.

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**Ernutin.**—BURROUGHS, WELLCOME & Co., London.—This drug contains the specific active principles of ergot, the chief of which is the alkaloid ergotoxine. It is physiologically standardised, and presents a uniform degree of activity. For oral administration the dose is 30 to 60 minims. The tabloid for hypodermic use contains gr.  $\frac{1}{100}$ .

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"**Wellcome**" **Brand Anæsthetics.**—BURROUGHS, WELLCOME & Co., London. It is well known that chloroform is subject to decomposition by the action of air and ordinary daylight. To

avoid all possibility of deterioration from such influences, "Wellcome" Brand Chloroform is issued in hermetically-sealed amber-coloured glass tubes.

"Wellcome" Brand Ether, S.G. 720, which conforms to the requirements of the British Pharmacopœia for pure ether, is also issued in hermetically-sealed glass tubes. By this method perfectly fresh and chemically pure anæsthetics are always available.

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**Nutritive Liquid Peptone with Creosote.**—PARKE, DAVIS & Co., London.—This is described as a nutritive liquid, containing peptone and the digested nutritive constituents of malt.

As there are various preparations of peptone on the market, an analysis of the above was made in order to verify the statements concerning it.

We consider it to be one of the best of its kind, especially as it contains nearly 20 per cent. of solid matter, and therefore is more than a simple stimulant. It contains non-coagulable proteid, together with extract of malt. On distilling the liquid, a little alcohol passed over, probably added as a preservative.

It possesses a pleasant flavour, and is altogether an attractive preparation. The combination with creosote and guaiacol (nutritive liquid peptone with creosote) should be very useful and acceptable to patients with chronic lung diseases.

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**Triple Glycerophosphates with Nuclein** (Chocolate-coated tablets).—PARKE, DAVIS & Co.—These tablets provide the tonic, nutritive and reconstructive properties of the glycerophosphates in association with the bactericidal action of nuclein. Nuclein, it will be remembered, also possesses the valuable power of increasing leucocytosis. This combination is valuable in debilitated conditions generally, and particularly in the various manifestations of tubercular disease, as scrofula, abscess, lupus, adenitis, ulcers and phthisis.

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**No. 509 Compressed Tablets, Phenol-Phthalein Compound.**—PARKE, DAVIS & Co.—Each of these tablets contains 1 grain of phenol-phthalein,  $\frac{5}{16}$  grain strychnine sulphate, and  $\frac{1}{16}$  grain of extract of belladonna leaves. The laxative effect of phenol-phthalein is well known; it is reputed to be particularly well adapted for use in habitual constipation, acting without pain or tenesmus. The strychnine and belladonna are valuable auxiliaries, giving tone to the intestinal tract and restoring natural function. The sugar-coated tablet is a particularly acceptable as well as convenient mode of prescribing these drugs. The dose for adults is from three to five tablets at bed-time; for children and delicate women, from one to three tablets will be sufficient.

**Iodalbin.**—PARKE, DAVIS & Co.—Iodalbin is an iodo-proteid compound containing 21 to 25 per cent. of iodine. It is in the form of an almost tasteless powder, insoluble in water, acids or alcohol, but readily soluble in alkaline solutions. When administered, it passes unchanged through the stomach, and is gradually absorbed in the intestine, thus avoiding the gastric irritation that the alkaline iodides are liable to excite, and also ensuring a milder systemic effect. Experiments on animals show the presence of iodine in the saliva very shortly after its administration, but very little can be traced in the fæces. Several months of close clinical observation demonstrate that iodalbin produces the typical alterative effect of the organic iodides without their disadvantages. Iodalbin may therefore be advantageously prescribed in preference to the alkaline iodides in all cases where such treatment is indicated. A smaller dose, 5 to 10 grains, is sufficient, though many patients have taken as much as 60 grains per diem without untoward effects.

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**Adrenalin and Eucaine Tablets.**—PARKE, DAVIS & Co.—Considerable attention is now being given to local analgesia, as preferable in many cases to total anæsthesia, and for this purpose "Eudrenine" is daily being more and more used. For medical men abroad and for those who prefer to make their own solution at the time of operating, these tablets of Adrenalin and Eucaine have been introduced. Each contains  $\frac{1}{100}$  grain of adrenalin and  $\frac{1}{4}$  grain of eucaine lactate, with a proportion of sodium chloride sufficient to impart salinity to the solution. One tablet dissolved in 17 minims of sterile distilled water forms an analgesic and ischæmic agent for use in dental extractions and small operations, containing 1 per cent. of the eucaine salt and about 1 of adrenalin in 30,000 parts. One tablet, dissolved in 85 minims of sterile distilled water forms a solution similar in strength to that used in operations at University College Hospital, as reported in *The Lancet*, July 25th, 1903, and *The British Medical Journal*, December 24th, 1904.

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**Formidine.**—PARKE, DAVIS & Co.—Formidine is a potent antiseptic suitable for internal or external use. Chemically it is methylene disalicylic acid iodide, a condensation product of iodine, formic aldehyde, and salicylic acid. It is insoluble in water, alcohol and dilute acids. In contact with alkaline organic secretions, it slowly dissolves and develops the characteristic germicidal properties of its constituents, hence it is most useful for bacterial infections of the intestinal tract. The dose is from 1 to 5 grains. Externally it is used in place of iodoform as a stimulating, non-irritating dressing for wounds, ulcers, &c., and as a dusting powder for various skin affections. Its antiseptic

power has been proved to be greater than that of iodoform, whilst it is free from offensive odour, does not stain the skin or clothing, does not irritate, and does not produce toxic effects when applied over large areas.

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**Tannigen** has been found particularly useful *in infantile diarrhœa*. Tannigen is an odourless and tasteless preparation. The fact that it passes unchanged through the stomach, and is not decomposed into tannic acid until it reaches the intestinal canal, renders it of great value in gastro-intestinal affections. Dose: For adults, up to 15 grains; children, 2—5 grains, in milk, as frequently as the occasion may require. A convenient way of administering Tannigen is the tablet form.

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**Tilia.**—PEEK, FREAN & Co., London.—Tilia is a name given to a milk proteid manufactured by Peek, Frean and Co.

It is a white powder, almost tasteless and odourless, and gives the characteristic proteid reactions when examined chemically.

As a food accessory milk proteids are extremely valuable, being very rich in nitrogen, and readily digested and assimilated.

In addition to Tilia in the form of a powder, Peek, Frean and Co. have put on the market various products containing Tilia, such as cocoa and various kinds of biscuits, to which the introduction of a large percentage of the proteid is guaranteed.

We examined several of these with satisfactory results, but consider the "Diabetic Biscuits" deserving of special notice. They are starch and sugar free, and when placed on a dilute solution of iodine show not the slightest blue colouration—a very delicate test, showing the absence of starch.

We are pleased to speak highly of these preparations.

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**Pertussin.**—E. TAESCHNER, Berlin.—This preparation is a saccharated elixir, which contains as the chief active ingredient essential oil of thyme. It is recommended for whooping-cough, asthma, catarrh of the larynx, &c. It is not unpleasant to take, and acts as a fairly powerful expectorant.

It is doubtful whether the use of such proprietary articles as this can be justified when so many well-known and approved remedies, prepared from published formulæ, are at the disposal of the physician.

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**Grape Nuts.**—GRAPE NUTS Co., Shoe Lane, London, E.C.—During recent years grape nuts have been much advertised as a food.

An analysis of the preparation reveals the presence of proteids

and soluble carbohydrates (dextrin and reducing sugars), which have been derived from the starch present in the cereals used in the manufacture. Some of the starch has remained unchanged during the preparation of grape nuts; this we consider an advantage for most people.

**Claroma : Catarrh Scent.**—J. M. BANNERMAN, Edinburgh.—This inhalant for catarrh is a germicide remedy, a concentrated solution of antiseptics with essential oils. It is free from cocaine and opiates, and it produces a cool, soothing sensation which seems to free the breathing, arrest discharge and sneezing, and give relief to the pain and fulness of the head.

**Tablets.**—THE BAYER COMPANY LIMITED, St. Dunstan's Hill, London.

Aspirin.  
Helmitol.  
Heroin Hydrochl. (gr.  $\frac{1}{4}$ ).  
Tannigen.  
Trional-Bayer.  
Veronal.

Many of the special preparations of this firm are now issued in five-grain tablets. We have received specimens of the above-named. They represent a convenient and handy mode of administration of drugs which are becoming increasingly useful. The tablets are of the highest quality, and they readily disintegrate.

For the chemical analyses mentioned in the above report we have to thank Mr. O. C. M. Davis, B.Sc., A.I.C., of the University College Laboratory.

### The Library of the Bristol Medico-Chirurgical Society.

*The following donations have been received since the publication  
of the List in June :*

*August 31st, 1907.*

|                               |    |    |    |    |    |            |
|-------------------------------|----|----|----|----|----|------------|
| L. M. Griffiths (1)           | .. | .. | .. | .. | .. | 1 volume.  |
| Middlesex Hospital (2)        | .. | .. | .. | .. | .. | 1 „        |
| R. Shingleton Smith, M.D. (3) | .. | .. | .. | .. | .. | 5 volumes. |

Unbound periodicals have been received from Dr. Shingleton Smith, and pamphlets have been presented by Mr. L. M. Griffiths.

## SIXTY-FIFTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund, or received through the *Journal*.

|   |   |      |
|---|---|------|
| <b>Adamson, H. G.</b> ..                  | <i>Skin Affections of Childhood</i> .. .. .   | 1907 |
| <b>Ballance, C. A.</b> ..                 | <i>Some Points in the Surgery of the Brain</i> ..   | 1907 |
| <b>Barwell, H.</b> .. ..                  | <i>Diseases of the Larynx</i> .. .. .   | 1907 |
| <b>Bennie, P. B.</b> ..                   | <i>Treatment of Hip Disease</i> .. .. .   | 1907 |
| <b>Budin, P.</b> .. ..                    | <i>The Nursling.</i> (Tr. by W. J. Maloney) ..  | 1907 |
| <b>Campbell, H.</b> ..                    | <i>On Treatment</i> .. .. .   | 1907 |
| <b>Ehrlich, P.</b> .. ..                  | <i>Collected Studies on Immunity.</i> (Tr. by<br>C. Bolduan) .. .. .                      | 1906 |
| <b>Guthrie, L. G.</b> ..                  | <i>Functional Nervous Disorders in Childhood</i>  | 1907 |
| <b>Horsley and Mary D. Sturge, Sir V.</b> | <i>Alcohol and the Human Body</i>   | 1907 |
| <b>Janet, P.</b> .. .. .                  | <i>The Major Symptoms of Hysteria</i> .. ..   | 1907 |
| <b>Johnson, J.</b> .. ..                  | <i>Change of Air</i> .. .. . (1) 3rd Ed.  | 1832 |
| <b>Lowe, P.</b> .. .. .                   | <i>A Discourse on the Whole Art of Chyrurgery</i><br>(3) 4th Ed.                          | 1654 |
| <b>Luff, A. P.</b> .. ..                  | <i>Gout</i> .. .. . 3rd Ed.   | 1907 |
| <b>Madden, F. C.</b> ..                   | <i>Bilharziosis</i> .. .. .   | 1907 |
| <b>Maddox, E. E.</b> ..                   | <i>Ophthalmological Prisms</i> .. .. . 5th Ed.  | 1907 |
| <b>Miles, A. Thomson and A.</b>           | <i>Manual of Surgery</i> Vol. II. 2nd Ed.   | 1907 |
| <b>Murrell, W.</b> ..                     | <i>What to do in Cases of Poisoning</i> 10th Ed.  | 1907 |
| <b>Oppenheimer, C.</b> ..                 | <i>Toxines and Anti-Toxines.</i> (Tr. by C. A.<br>Mitchell) .. .. .                       | 1906 |
| <b>Osler, W.</b> .. ..                    | <i>The Growth of Truth</i> .. .. . (3)  | 1907 |
|   | <i>Pharmacopœia of the Bristol Royal Hospital for Sick Children and<br/>Women</i> .. .. . | 1907 |
| <b>Poynton, F. J.</b> ..                  | <i>Heart Disease and Thoracic Aneurysm</i> ..   | 1907 |
| <b>Sargent, P.</b> .. ..                  | <i>Surgical Emergencies</i> .. .. .   | 1907 |
| <b>Scott, H. H.</b> .. ..                 | <i>Post-Graduate Clinical Studies.</i> 1st Ser.   | 1907 |
| <b>Starling, E. H.</b> ..                 | <i>The Croonian Lectures</i> .. .. . (3)  | 1905 |
| <b>Startin, J.</b> (Ed.) ..               | <i>A Skin Pharmacopœia</i> .. .. . 6th Ed.  | 1907 |
| <b>Steell, G.</b> .. ..                   | <i>Diseases of the Heart</i> .. .. .  | 1907 |
| <b>Sturge, Sir V. Horsley and Mary D.</b> | <i>Alcohol and the Human Body</i>   | 1907 |
| <b>Sutherland, G. A.</b>                  | <i>Treatment of Disease in Children</i> .. .. .   | 1907 |
| <b>Sylvius, F. de la B.</b>               | <i>Præleos Medicæ</i> .. .. . (3) Editio altera   | 1672 |
| <b>Thomson and A. Miles, A.</b>           | <i>Manual of Surgery.</i> Vol. II. 2nd Ed.  | 1907 |

## TRANSACTIONS, REPORTS, JOURNALS, &amp;c.

|  |         |
|--|---------|
| American Dermatological Association, Transactions of the .. .. | 1906    |
| American Journal of Ophthalmology, The .. .. Vol. XXIII.       | 1906    |
| Archives of Neurology .. .. . Vols. II., III.                  | 1903-07 |

|  |                 |      |
|--|-----------------|------|
| Archives of the Middlesex Hospital .. .. .   | (2) Vol. IX.    | 1907 |
| Bäder-Almanach .. .. .   | (3)             | 1907 |
| Bristol Port Sanitary District, Annual Report of the Medical Officers of the, 1906 .. .. . |                 | 1907 |
| British Medical Journal, The .. .. .   | Vol. I. for     | 1907 |
| Clinical Journal, The .. .. .  | Vol. XXIX.      | 1907 |
| Edinburgh Medical Journal, The .. .. .   | N.S., Vol. XXI. | 1907 |
| English Catalogue of Books, The, for 1906.. .. .   |                 | 1907 |
| Hospitals—   |                 |      |
| St. Thomas's Hospital Reports .. .. .  | Vol. XXXIV.     | 1906 |
| Westminster Hospital Reports .. .. .   | Vol. XV.        | 1907 |
| Journal of Laryngology, The .. .. .  | Vol. XXI.       | 1906 |
| Journal of Medical Research, The .. .. .   | Vol. XV.        | 1906 |
| Lancet, The .. .. .  | Vol. I. for     | 1907 |
| Library Association Record, The .. .. .  | Vol. VIII.      | 1906 |
| Münchener medizinische Wochenschrift .. .. .   | Bd. I.          | 1907 |
| Obstetrical Transactions .. .. .   | Vol. XLVIII.    | 1907 |
| Progressive Medicine .. .. .   | Vol. II.        | 1907 |

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## MEETINGS OF SOCIETIES.

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### Bristol Medico-Chirurgical Society.

*June 12th, 1907, at Weston-super-Mare.*

Mr. JAMES TAYLOR, President, in the Chair.

Dr. CHARLES and Prof. WALKER HALL showed specimens from a case of **Carcinoma of the Stomach**.

Dr. H. STANLEY BALLANCE showed a female patient upon whom **Estlander's Operation for Empyema** had been successfully performed. The following is the history of the case in brief:—Mrs. B., æt. 45, first became ill in October, 1901. On July 27th, 1902, the left side was found to be almost motionless during respiration; there were signs of a large amount of fluid; the temperature was 103°. Part of the 9th rib in the posterior axillary line was removed, and a good deal of pus evacuated. One month later part of the 8th rib was removed, and a second and smaller pus-containing cavity opened. On February 6th, 1904, a probe could be passed upwards to the level of the 1st rib; parts of the 5th, 6th, 7th, 8th and 9th ribs, with intervening soft parts and parietal pleura, were removed. On February 27th, 1904, parts of



the 2nd, 3rd and 4th ribs were similarly removed. Eleven days later symptoms of acute pericarditis appeared, but passed off rapidly on administering antistreptococcus serum. The patient improved until the following July, and then for 3½ months was melancholic. The wound is now healed, and the patient living her ordinary life.

Dr. ROXBURGH read a paper on a case of **Banti's Disease with Complications**. The patient (female), aged 48, presented symptoms of extreme anæmia, slight dilatation of the heart, enlargement of spleen and liver, a hectic temperature and deficient air entry, with crepitations in the left upper and right middle pulmonary lobes. These conditions had begun three months before admission (though dyspnœa on exertion had been observed two years earlier). On admission the liver reached 2½ inches below the right costal margin, and the spleen, which was peculiarly hard to the sense of touch, projected two finger breadths below the left costal edge. The blood count was erythrocytes, 2,320,000; leucocytes, 6,316; no poikilocytes; hæmoglobin decidedly diminished. In twenty-three days these figures had fallen respectively to 1,111,000 and 4,900; general pigmentation of the skin had become marked; and pulmonary signs more pronounced, including whispering pectoriloquy at the left apex. No tubercle bacilli were found in the scanty sputum. The spleen had increased in size, and the liver extended seven inches below the costal margin. Five weeks after admission, the patient died, and the autopsy showed, put very shortly:—Heart: Fatty degeneration. Lungs: Right firmly adherent in most of its extent to the thoracic wall and diaphragm; both lungs in a state of fibrous cirrhosis, the result of chronic interstitial pneumonia; no bronchiectasis, no caseation or tubercles. Bronchial glands large, hard, and black, as in anthracosis, but not tubercular. Spleen: 7.5 inches in length, tough and hard, with thickened capsule, on section fibrous; Malpighian bodies indefinite. Liver: Peculiarly formed, the right lobe extending almost to the iliac crest; the whole organ very firm and tense, in a state of fine cirrhosis with fatty degeneration. Kidneys and supra-renals normal. No tubercle of mesenteric glands, but the mesentery dotted with small black spots, probably former petechiæ. Microscopically, the extreme fibrosis of spleen, liver and lymphatic glands was confirmed. These irritative changes and the train of symptoms leading directly to death, pointed to some such chronic intoxication as that which presumably occurs in Banti's disease; but in the course of that syndrome the splenomegaly seems to precede the anæmia and enlargement of liver, sometimes by several years. In the absence of a complete history it was impossible to say whether such had been the case here. The chronic interstitial changes in the lungs may have been due directly (or indirectly, following a chronic interstitial inflammation) to the same toxin.

Dr. Armstrong's paper at last year's Toronto meeting of the British Medical Association gave an excellent *resumé* of the subject and a complete list of all the cases of Banti's disease up to that date treated by excision of the spleen. This list comprised 32 cases, with 23 recoveries, *i.e.* 72%. Dr. Armstrong concluded (1) that the disease is essentially progressive; (2) that no treatment other than splenectomy is permanently effective in removing the anæmia and hindering the hepatic cirrhosis; and (3) that even in advanced cases the operation is followed by immediate improvement, which often has a considerable amount of permanency. He laid special stress on the dilatation of the splenic vein, and even suggested that a primary endophlebitis of that vessel might set up the disease by causing backward pressure, injury to the vitality of the spleen pulp, and consequent production of an enzyme, which acted as a toxin to the liver. This was as yet purely theoretical, and the primary cause of the splenomegaly still remained obscure.—Dr. Roxburgh's paper was criticised by Dr. EDGEWORTH and Dr. MICHELL CLARKE. The former doubted whether the case properly should be classed as Banti's disease. The latter admitted the complexity of the case, and the great difficulty of its diagnosis.—Dr. ROXBURGH, in reply, affirmed his belief in the splenic origin of the symptom complex, while the pulmonary cirrhosis was probably an after effect, like the Hanot's cirrhosis of the liver, which was so constant.

Dr. CROUCH read a paper on a suggested **Treatment for Functional Aphonia**. (For this paper see p. 214.)

Dr. MICHELL CLARKE read a paper on the **Treatment of Graves's Disease**. (Vide p. 201.)

J. LACY FIRTH.

H. F. MOLE, *Hon. Sec.*

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## Local Medical Notes.

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**University College, Bristol.**—Examination Results:—

M.B. LOND.—*Intermediate Examination*: P. J. Veale.

F.R.C.S.—*Primary Examination*: E. A. Dorrell.

CONJOINT BOARD.—*Practical Pharmacy*: H. H. Hiley, V. Pinnock. *Chemistry and Physics*: H. B. Logan, G. H. Piercy, W. Worger, B. G. Derry, A. G. T. Fisher. *Anatomy and Physiology*: G. H. Griffiths, W. A. Reynolds, M. M. Lopez, R. S. S. Statham, H. R. B. Hull. *Medicine*: F. T. Boucher, A. E. Miles\*, *Surgery*: F. S. Scott.

\* Completes Examination.

L.D.S. ENG.—*Chemistry and Physics*: L. J. Kinnersley, J. D. Melhuish. *Physics only*: G. Smith.

INDIAN MEDICAL SERVICE.—At the recent examination for appointments in the Indian Medical Service, three students of University College, Bristol, were successful. Mr. V. B. Green-Armytage gaining second place, with 3,834 marks; Mr. Francis Shingleton Smith, M.B. Cantab., tenth place, with 3,410 marks; and Mr. A. N. Thomas, fourteenth place, with 3,283 marks. There were thirty-four candidates for the examination, and of these twenty-seven qualified to sit for the examination.

DENTAL DEPARTMENT.—It is now possible for students to undertake their Mechanical Dentistry and Metallurgy on the College premises, where laboratories have been fitted out with all the latest apparatus for this purpose. The composition fee for the entire curriculum, including Hospital practice and two years' mechanical work in the laboratory, is 140 guineas.

The following appointments have recently been made:—Carey F. Coombs, M.D., B.S. Lond., Demonstrator in Dental Bacteriology; E. A. G. Dowling, L.R.C.P., M.R.C.S., L.D.S., Lecturer in Dental Anatomy, Physiology, and Dental Histology; Frederick W. Perry, L.D.S., Demonstrator in Dental Anatomy, Physiology and Dental Histology; J. W. McBain, M.A., Lecturer in Dental Metallurgy and Practical Dental Metallurgy; Reginald Davis, Instructor in Dental Mechanics; W. J. Lennox, L.D.S. Eng., Honorary Demonstrator in Physiology.

ADMISSION OF WOMEN STUDENTS TO MEDICAL DEPARTMENT.—We understand that the Council of the College has undertaken the important step of admitting women to the full medical curriculum. Previously they had been allowed to attend certain lectures, but this privilege had not to any great extent been taken advantage of. The rules now admit them to the whole course on exactly the same footing as men.

**Bristol General Hospital.**—J. Odery Symes, M.D. Lond., has been appointed Physician, and Carey F. Coombs, M.D. Lond., has been appointed Assistant Physician.

**Dr. John Beddoe.**—An interesting ceremony took place recently at the Bristol Art Gallery, when a portrait of Dr. Beddoe, by Miss Wren, was handed over to the chairman of the Museum Committee for hanging in the Bristol Room. It had been subscribed for by Dr. Beddoe's friends and admirers, who wished to have some permanent memento of this great ethnologist, who had lived and worked in the city for so many years. Dr. Beddoe, who was present, thanked the speakers for their kind expressions of affection.

# The Bristol Medico-Chirurgical Journal.

*"Scire est nescire, nisi id me  
Scire alius sciret."*

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DECEMBER, 1907.

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## SYPHILIS.

The Presidential Address, delivered on October 9th, 1907, at the opening of the  
Thirty-fourth Session of the Bristol Medico-Chirurgical Society.

BY

HENRY WALDO, M.D.,

*Consulting Physician to the Bristol Royal Infirmary.*

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FIRST of all I wish to renew my cordial thanks to you for electing me as your president. In searching for a suitable subject for an address, it occurred to me that syphilology had made great strides during recent years, chiefly owing to the discovery of the *spirochæta pallida*. Syphilis is truly called the imitator of very many other diseases. It is also one of the oldest, if not the oldest disease which has afflicted mankind. In Fournier's recent work on syphilis the author regards this disease as such a common cause of miscarriage, that he considers that syphilis is one of the chief factors in the causation of the present depopulation of France. I scarcely know what the staff of a hospital would find to do if syphilis in its different phases were eradicated. It offers many obscure clinical cases for investigation, and when

recognised, it is one of the most satisfactory conditions to treat. One of our members told the City Council that sanitation was rapidly interfering with the gold mine of medicine. I think that if syphilitics were no more the mine might be closed down. The opinion seems to be gaining ground that syphilis is absolutely curable, excepting when it is associated with the abuse of alcohol. It was Moxon, I think, who said that spirit is the best preservative of syphilis. Its curability is borne out by the following facts.

It used to be taught that syphilis could only be acquired once in a lifetime, and that reinfection was impossible; but a number of cases have been recorded by careful observers which seem to establish the possibility of reinfection beyond a doubt. Hutchinson has observed two cases, in one of which the patient passed through two attacks of primary and secondary syphilis, with an interval of five years. In the second case the patient had three attacks, with intervals of fourteen and nine years. Berkeley Hill relates the case of a surgeon who acquired syphilis in the usual way; eleven years later he contracted a digital chancre, followed by secondary syphilis. It is interesting to note that Ricord in his later years recognised the possibility of reinfection. In a letter to W. Acton in 1872, he said: "Now that we have authentic examples of fresh contagions of indurated chancres, with consecutive evolution of the whole series of constitutional symptoms, this proves that patients have been cured, just as the possibility of contracting small-pox afresh, or of vaccination again taking, proves that the first variolous or vaccine influence had ceased." Sir William Gowers has been reputed to have made the statement: "Once a syphilitic, always a syphilitic." But when he was asked to give his reasons for this at a medical meeting, he said: "I have never said such a thing, I have never thought such a thing." He believed every syphilitic ultimately ceases to be a syphilitic, and he continued: "So far from being a sceptic as to therapeutics, I would say this, that you could bring syphilis to an end in the kingdom if you kept under the influence of mercury every unmarried man between 18 and 50 years of age

continuously. But," he added, "you would extinguish other things besides syphilis. Promotion in the army would become mysteriously rapid, and the members of the House of Lords would gradually melt away. But," said Sir William, "I am not sure that such a price would be too high to pay for such a boon. That is," he said, "a matter of opinion. We all know Mr. Jonathan Hutchinson's view, namely that he believes that mercury is an antidote to the syphilitic poison if properly administered."

The parasitic germ of syphilis was discovered by Fritz Schaudinn two years ago (1905), and named the *spirochæta pallida*. It was called *pallida* on account of the physical properties of the germ possessing a low power of refracting light. Maclellan regards the *spirochæte* as only one stage in the life history of the micro-organism of syphilis. Unfortunately, a few months after his discovery Schaudinn died, at the early age of 35.

We as a profession are immensely indebted to men like Schaudinn, who devote their lives to work in their clinical laboratories, who as a rule are miserably paid, and who are not recognised in anything like the way they should be. They may console themselves in the words of Emerson, that "a man was born not for prosperity, but to suffer for the benefit of others." I am sure we all agree with the views of Mayo Robson, that there should be a closer union between the work of clinicians and pathologists. We do not make all the use we might of pathological investigation to aid our clinical observations. He thinks the deep debt that preventive medicine owes to bacteriology is likely to be equalled, or even excelled, in the realm of treatment; for not only have bacteriologists shown us how to treat infectious diseases, such as diphtheria, by antitoxic serums, but we have had demonstrated to us recently how the tissues can be rendered immune to various infective agents by inoculation, under suitable conditions that can be determined by the method of blood examination devised by Sir A. E. Wright. Robson says the chemistry of the body is as yet in its infancy, but it has a great future before it. He advocates that investiga-

tions of a private nature, not involving public health questions, should be conducted at the expense of the individual requiring them; and in those of a more difficult and complicated character, especially when the clinical diagnosis depends on the result of the pathological findings, it seems to him desirable that the pathologist should be met in consultation. While it seemed most desirable that poor patients should not be deprived of the help afforded by pathology, yet it seemed anything but desirable that wealthy or well-to-do patients should be paying adequate fees to their medical or surgical advisers and a mere pittance to the pathologist, on whose findings may hang very vital issues.

Well, gentlemen, we are all looking forward in the hope that this important discovery of the spirochæta pallida will assist us in treating patients who may be supposed to be syphilitic. It has long been debated whether it is wise to administer mercury to a person with a primary sore, or to wait for confirmatory symptoms. Marshall says (in *Syphilology and Venereal Disease*, 1906) none of the attempts at abortive treatment by destruction or excision of the chancre have been definitely successful. The chancre has been excised a few hours after its appearance, the lymphatic glands have been removed, an abrasion has even been excised before any chancre appeared, but all these measures have failed to prevent the development of constitutional syphilis.

The failure of these abortive methods is due to the fact that syphilitic infection of the system takes place very rapidly, both by the lymphatics and blood vessels. When the chancre appears the organism is already entirely infected, or, at any rate, the infection has extended over an area too large for any form of excision to be effectual.

The recent experiments of Metchnikoff,<sup>1</sup> however, seem to show that syphilitic infection may be prevented by early inunction of the point of inoculation with an ointment containing from 25 per cent. to 33 per cent. of calomel. After establishing this fact by a series of experiments on monkeys, the experiment was tried on a medical student who volunteered for the purpose.

<sup>1</sup> *Brit. M. J.*, 1906, ii. 1510.

Syphilitic virus from two chancres was inoculated by scarifications in the balano-preputial furrow ; at the same time four macacus monkeys were inoculated with the same virus. An hour after inoculation calomel ointment was rubbed into the scarifications for eight minutes in the student and in one of the monkeys. Twenty hours afterwards the same treatment was applied to another monkey. The two remaining monkeys were kept for control, and developed syphilitic chancres seventeen days after inoculation. The monkey treated twenty hours after inoculation developed a chancre on the thirty-second day. No sign of syphilis appeared in the student, nor in the monkey treated at the same time, up to three months after the experiment. As Marshall points out, these experiments may require further confirmation, yet they tend to show that syphilis may be prevented by mercurial inunction of the point of inoculation an hour after infection. But he thinks the practical application of this discovery is limited, owing to the fact that the point of inoculation is not known with certainty unless there is an abrasion. Moreover, patients seldom apply for treatment within an hour of possible infection. However, if such a case presents itself, inunction with calomel ointment at the supposed point of inoculation is indicated. Pernet says<sup>1</sup> that every medical man, dental surgeon and midwife, liable as they are to accidental infection, should have a pot or tube of it handy in case of need, so as to apply it with as little delay as possible. Marshall, in the following week's *Journal*, suggests that the ointment should be applied before the event.

Jonathan Hutchinson says the earlier mercurial treatment is begun the better, provided the diagnosis is certain. He also thinks that many chancres are sufficiently characterised to justify immediate treatment. We should all agree, I think, that as mercurial treatment, to be effectual, must extend over rather long periods, it is a serious and unjustifiable proceeding to commence treatment until we are certain of what we have to treat. And if the pathologist can assure us of the presence of the parasitic germ, it must be of the greatest advantage ; for

<sup>1</sup> *Brit. M. J.*, 1907, i. 730.



although this organism has not at present been cultivated, and cannot, therefore, fulfil the postulates of Koch to prove its pathogenic nature, it has been found sufficiently frequently in syphilitic lesions to justify the assumption that it is the specific microbe of syphilis.

In the case of chancres a doubtful diagnosis may be cleared up by finding the spirochæta in the exudation. It has been found almost constantly in the primary and secondary lesions of syphilis, not only on the surface of ulcerated lesions, but also in non-ulcerated lesions, such as papules and lymphatic glands, and in the viscera. It has also been found in the blood (although rarely). Several recent observations considerably modify various previous conceptions with regard to the disease: for example, the discovery of the microbe in gummata, showing that the gumma might be contagious, the fact that Levaditi has detected the spirochæte in the renal epithelium and various other organs in congenital syphilis, showing that the normal secretions, such as the urine, may be contagious.

The spirochæte has not been found in men or monkeys apart from syphilitic lesions. The reason why it has not been observed before in syphilitic lesions is explained by the difficulty in technique, and also by the fact that it is not always found. Metchnikoff failed to find it in 26 per cent. of the cases he examined. The London men tell me they have the very greatest difficulty in finding it. Thus a negative examination does not prove that a lesion is non-syphilitic, any more than the absence of the tubercle bacillus in lupus negatives the tuberculous nature of this affection. Levy Bing has shown that the spirochæta pallida rapidly disappears under the influence of mercury. Six or seven days after an injection of gray oil they became scarce, and a week after the second injection they had almost disappeared. Kowalewski, after demonstrating their presence, noted their disappearance after six injections of sublimate.

In the *British Medical Journal* for 16th June, 1906, Dr. W. R. Grove, of St. Ives, Huntingdonshire, gives brief histories of three cases of syphilis, presumably acquired from a baby 18 months old, with the inherited complaint. In each case the site of

infection was believed to be the tonsil. A leading article appeared in the same journal saying that the view that the power of infection in inherited syphilis was much exaggerated by writers in the past is very widely held nowadays, and discrediting the belief that inherited syphilis is infectious. At any rate, in the light of more recent knowledge, the editor thought many would now consider the evidence as insufficient. In the following week's *Journal* a letter appears from Mr. Jonathan Hutchinson, in which he says that he has read Dr. Grove's communication with much interest, and also the editor's comments on it not without amazement. He had supposed that the contagiousness of inherited syphilis in infants was a fact about which no controversy was possible. He said it was, as all knew, in order to explain cases in which exposure to risk occurred without ill result that Colles formulated the law now known by his name.

Mr. Hutchinson says he is quite in the dark as to what the "more recent knowledge" referred to may be. The only more recent knowledge with which he is acquainted is that which concerns the spirochæte, and this he considers is entirely confirmatory of his conclusions, as this parasite has been found repeatedly in the early lesions of inherited syphilis, and he says that as it is now held to be the efficient agent in contagion, it is difficult not to consider its presence as proof that this form of the malady may be communicable. Primary infection of the tonsil in connection with the feeding of this class of infants has been witnessed repeatedly. Mr. Hutchinson reminds his readers that not so very long ago one of our associates had to pay a considerable sum to a wet-nurse whom he had inadvertently permitted to suckle an infant suffering from syphilis, which was believed to have been inherited. He concludes by saying that he must hold that to propound unsupported doubts involves not only a very foolish heresy, but a very dangerous one; and he much regrets that it should seem to have received in any degree the support of the editorial pen of the *British Medical Journal*.

Some years ago I was asked by a lady to attend her in her first confinement. This I was obliged to decline, as there is

a rule at our Infirmary prohibiting a physician from practising midwifery, and so the patient was passed on to a medical friend. Some little time after the birth of the child the mother consulted me for an eruption on her fingers which much resembled scabies, although it did not itch. After a little interrogation as to whether she was able to suckle her baby she said, "Oh, yes!" but that it was rather painful on account of the nipple being sore. After examining this sore, I came to the conclusion that it was of the nature of a chancre, and that the child was the subject of congenital syphilis. They were both very amenable to treatment, but after a time the child developed a large liver, in all probability lardaceous disease, and died with dropsical symptoms and other signs of congenital syphilis. Well, this case was clearly an exception to what is known as Colles's law, and I have often intended to publish it. It was in 1837 that Colles, of Dublin, pointed out that the mother of a syphilitic infant, procreated by a syphilitic father, was herself immune against infection, and could suckle her child with impunity; while a healthy wet-nurse could contract a chancre of the nipple by suckling the same child. Since this time other well-authenticated cases of exception to this law have been recorded, where mothers contracted chancres of the nipple by suckling their syphilitic infants. Pernet says<sup>1</sup> that Colles's law is right; and that Colles's law is a law I have myself no doubt whatever. The alleged exceptions, he says, when examined, cannot hold water. It is obvious, therefore, he continues, that the mother should also be treated, especially from the point of future pregnancies.

Upon inquiring into the history of the father in my case, I found that he contracted syphilis in the usual way some years before marriage, that the treatment he received was a mere farce, and that he was addicted to alcohol, which has been well called the born enemy of syphilitics.

When may a syphilitic safely marry is a question which is not easily answered. Mr. Hutchinson differs from most other authorities in stating (as recently as June, 1906) that if the treatment has been continued for two years from the date of

<sup>1</sup> *Brit. M. J.*, 1907, i. 734.

the chancre a man may safely marry, but that a much longer period is necessary for a woman. He also remarked: "I have let hundreds of such patients marry, and they have never come back to me in consequence of having infected their wives, or having syphilitic children." Marshall thinks that this statement cannot be accepted as evidence of the safety of the two years' system, for, in case of failure, it is probable that the patients would not come back. In this way, he adds, the successes are recorded, but the failures unknown.

Fournier lays down the law that no syphilitic should marry for at least three or four years after the onset of the disease, and then only when the following conditions are fulfilled: (1) absence of actual lesions; (2) prolonged treatment; (3) a period of immunity from symptoms for at least one and a half to two years, during which time no treatment has been taken; (4) a benign type of disease. Fournier relates the history of twenty cases of marriage in syphilitics under two years; nineteen of the wives were infected, and there were twenty-eight pregnancies, resulting in thirteen abortions, six early deaths, six syphilitic infants, and only three healthy children.

Ledermann says: "Generally speaking, marriage may be allowed if at least five years have elapsed since the infection took place, if no more manifestations have occurred during the last two years, and if the patient has received an energetic and thorough mercurial treatment."

Baltzer is of opinion that marriage may be allowed during the fifth year, provided that the symptoms have been benign, the treatment regularly followed, and that there have been no symptoms during the fourth year. He also advises a course of preventive treatment immediately before marriage, and during the year following. In the case of a syphilitic woman, he says, preventive treatment is required for a long time, because the power of maternal transmission lasts much longer than that of paternal heredity.

Marshall thinks that any arbitrary time-limit is both dangerous and unscientific.

In referring to later forms of syphilis, a subject which resolves

itself into syphilitic disease of the arterial system, Darier says: "To study syphilitic arteritis in its widest sense is to deal with the whole pathology of syphilis." How many cases of so-called cerebral hemorrhage, heart failure and the like are due to syphilis. Arterial disease especially affects the arteries of the brain and of the heart—possibly of the spinal cord—in the earlier period, and accounts for general paralysis and tabes dorsalis in the later period.

Ferrier suggests that the terms cerebral tabes, spinal tabes, and cerebro-spinal tabes should be substituted for general paralysis, locomotor ataxy, and tabo-paralysis.

Sir William Gowers says hemiplegia from specific arterial disease is a malady in which we can make a confident pathological diagnosis from clinical facts. Every case, he says, of sudden hemiplegia—sudden, and therefore of vascular origin—occurring between the ages of 18 and 48, without Bright's disease, without heart disease, in an individual who is known to have had syphilis, may be confidently ascribed to syphilitic arterial disease. He has been through the facts of forty cases of that kind, all conforming to those conditions, and he finds that about one quarter of them occur in the first two years after acquiring syphilis, about one half in the first five years, nearly three-quarters in the first seven years, four-fifths in the first ten years, and the others are scattered over the next seven years. And as regards surgical maladies, Marshall points out that syphilitic arteritis affecting the vessels of the lower limbs may lead to gangrene, and cases of so-called "senile gangrene," occurring in middle-aged subjects, are now recognised by surgeons as usually due to syphilis. Aneurism of the lower limbs, too, is frequently due to the same cause. Or, again, effusion of fluid into a knee-joint, with sub-acute symptoms only, is often syphilitic. It differs from common rheumatism in only affecting one or two joints, and exclusively the larger ones such as the knee, and in the absence or transient nature of febrile symptoms. In gonorrhœal arthritis the affection is more acute and painful, and there is usually posterior urethritis present.

It is astonishing how authorities differ in regard to the

prognosis of late forms of syphilis. Pye-Smith says: "I confess I take a somewhat more favourable view of the outlook in cases of tabes than Sir William Gowers does. Perhaps," he says, "it is due to a smaller experience, but a few cases in which the result has been favourable make a great impression upon one; and while agreeing with him," he adds, as I am afraid all of us must as to the hopelessness of general paralysis, "I think cases of tabes are much less formidable. They are not so common, they last very much longer, often with long intervals of improvement or, at all events, abatement of the disease, before it is ultimately fatal. And sometimes—perhaps," he says, "it shows too sanguine a temperament—I have seen what looked like favourable results from mercurial treatment in tabes, whereas I do not think anybody has found such a result in general paralysis."

Jonathan Hutchinson says (at almost the same time, 1906): "Degenerative changes, such as tabes, are rarely arrested by specifics. All conditions attended by inflammatory changes, such as general paralysis of the insane, should be treated by small doses of mercury continued permanently." In his belief, if treatment of general paralysis be commenced in the very early stage a cure may be obtained, but small doses of mercury must be permanently continued. I have seen it stated that if some of the inmates of lunatic asylums had blue ointment regularly rubbed into their scalps there would be surprising results.

Dr. G. H. Savage has somewhat recently pointed out<sup>1</sup> that in cases of general paralysis of the insane the memory was not markedly affected. "Sometimes," he says, "as in advanced stages of general paralysis, there was a quite remarkable retention of memory, whilst in other forms of progressive mental decay, associated with alcoholism or senility, the loss of memory was the chief characteristic." Dr. Savage has also mentioned that among certain races—the Arabs and perhaps the Japanese—syphilis may be frequent and general paralysis rare. He adds that general paralysis was also said to be unknown amongst

<sup>1</sup> *Brit. M. J.*, 1906, i. 1344.

negroes and amongst the Irish. In his opinion syphilis required something more in order to produce this disease—alcoholism, worry and the stress of life, and perhaps large meat eating.

Widal has drawn attention to the fact that both in tabes and general paralysis leucocytosis of the cerebro-spinal fluid was constant and extremely well marked, the average being one hundred and thirty in the field. He thinks the presence of this leucocytosis is of great diagnostic importance; for example, as between tabes and peripheral neuritis, and between general paralysis and epilepsy.

However, apart from general paralysis, it has been stated that syphilis may cause all the common forms of insanity, from the most violent mania to the most complete idiocy, and, as Mott remarks, "Of all the causes of insanity, none writes with such a broad and indelible hand as syphilis." Barker says: "Considering the predilection of syphilis for the nervous system, it is remarkable that insanity is not more widespread than it is."

Some few years ago I was consulted by a male patient between 50 and 60 years of age for a sore throat. The tonsils were red and swollen with the appearance of "snail track," which is so suggestive of syphilis. There was also an asymmetrical palmar psoriasis with affection of the nails. After taking mercury for some time I sent him to see Mr. Hutchinson, who advised me to continue with the same treatment for six months. This advice was carried out very irregularly, and in addition to this drawback the patient was addicted to the alcoholic habit. After this he rather suddenly developed delusional insanity, was most restless and difficult to manage. I took ordinary precautions, and put him on gradually increasing doses of iodide, and rubbed in five per cent. oleate of mercury. Later on his relatives thought that he should be certified, but I could see that he was improving, and he very soon made a complete recovery. If I had not happened to know that this patient was syphilitic I do not think it would have occurred to me that he was the subject of syphilitic insanity. Whether this was a

case of early general paralysis cut short by treatment I am not sure.

One day a male patient about 30 years of age came to see me on his bicycle. He was exceedingly breathless, and could scarcely speak. Upon examining his chest I discovered that he had an aortic aneurism, and that one of his vocal cords was not acting owing to pressure on the recurrent laryngeal nerve. I advised him to go home to bed, and wait there till I came on the following day. I induced him to stay in bed for about three months, during the whole of which time he was taking rather large doses of iodide, and the improvement was very marked. About this time his children were being attended by their family doctor, and he asked this gentleman to examine his aneurism, and the opinion given was that he could not detect an aneurism at all. This doctor, however, suggested that Dr. Michell Clarke should meet him in consultation, and then the aneurism was found to be very much in evidence. After this the patient put himself under the care of an American doctor, who said that he quickly cured aneurism, and induced the patient to believe that he had cured him. The patient then wrote to one of the Bristol daily papers abusing Dr. Clarke and myself, and pointing out how very much English doctors were behind their American brethren. Some time after this Dr. Cory asked me to see this same patient with him, and I found him in a condition of acute mania. I thought that he would put his fist through the window pane every moment. We at once certified him, and he went to Fishponds Asylum, and I think it was through the zeal of Mr. A. L. Flemming that the aneurismal specimen found its way into our museum at the Infirmary. I have often regretted that I did not include mercury in the treatment when I had him in bed; perhaps the insanity might have been thereby avoided.

In all these nervous affections there is a simple and reliable sign which is worth special attention in making a differential diagnosis. It is that the loss of pupillary reflex to light constitutes by itself a sign which is almost pathognomonic of a syphilitic lesion of the nervous centres: the pupil is fixed.



Thus the Argyll-Robertson pupil is not the only pupillary sign of syphilis. For this help in diagnosis we are indebted to Babinski and Charpentier.

Syphilis sometimes attacks the aorta, and prepares it for aneurismal bulging. It less often limits its attentions to the aortic valves. Hale White says: "As for valvular disease, the aortic valves were rarely affected alone in rheumatism. Therefore, cases of aortic without mitral disease might be attributed to atheroma, or strain, or syphilis; and in women, as strain was rare, aortic disease was strong evidence of syphilis. The same applied to aneurism."

Some few years ago Dr. Shingleton Smith asked me to see a young woman in one of his wards at the Infirmary with symptoms somewhat resembling those of rheumatic fever. There was a loud murmur over the base of the heart, the patient was acutely ill, and seemed likely to do badly. Her symptoms did not respond to salicylates. There was an eruption over the body which was really the key to the situation. The condition had already been recognised by Dr. Smith, and the aortitis, with the other manifestations of syphilis, gave way to specific remedies, the patient made a good recovery, and I think lost all signs of the cardiac trouble, I may safely say, through the means of a skilful diagnosis.

As regards eruptions on the skin, Norman Meachen thinks that by cultivating the sense of touch it is possible to recognise whether the rash is syphilitic or not. There is he says a good deal of infiltration in a syphilitic eruption, and they all, except the macular, give one the impression as if the lesions were let into the skin, the whole structure of which seems to participate in the morbid process, and not the epidermis alone as in psoriasis, eczema, and most others.

The most inveterate case of syphilis I ever saw was in a woman who attended pretty regularly at the Infirmary for fifteen years. The disease expended itself chiefly on the face and neck, and left extensive cicatrices. There was a good deal of the intradermic form of lenticular syphilide in this case, which forms the atrophic papular syphilide by destruction of

the elastic tissue of the dermis, causing depressions simulating lineæ albicantes.

The eruption in this case was always controlled by iodides, but believing as I do that the disease is only scotched by these remedies, and not killed, she consumed a large quantity of mercury besides. I do not think she was an alcoholic, but she was badly fed, and so carried out my instructions of taking a quart of milk daily. She was also told to be in the open air as much as possible, and to sleep with an open window. Latterly I adopted the plan of intra-muscular injections of mercury, and then handed her over to Dr. Nixon, who, I believe, continued this mode of treatment. Hutchinson says intra-muscular injections are very dangerous, excepting in the hands of the expert, and should be wholly reserved for special conditions, chiefly in the army. If salivation commences, he says, it cannot be stopped except by excision of the portion of muscle containing the mercury.

This woman's husband became insane, and an inmate of the Fishponds Asylum ; probably a subject of syphilitic insanity.

Barker thinks that the cause of malignant syphilis is doubtful ; it has been attributed both to excessive virulence of the microbe, and to secondary infection with other organisms. It would appear, he says, more probable that it is due to the implantation of the microbe on virgin soil, *i.e.* on persons whose ancestors have been free from syphilis.

Whether the treatment of syphilis shall be continuous as advocated by Hutchinson, or intermittent as carried out by Fournier, is a matter of opinion. No doubt that for a time mercury increases the hæmoglobin and the red corpuscles : later on it diminishes them. This indicates that mercury should only be given for short periods at a time, and lends support to "the chronic intermittent treatment of Fournier."

There are many other diseased conditions which result from the parasitic germ of syphilis, and more especially when it is untreated in its early stages, often cases which are known as Lues insontium and syphilis ignota. Byrom Bramwell remarks : "Why is it that one man who drinks gets cirrhosis of the liver, while another man who drinks does not ? Is it that the man who

gets cirrhosis of the liver has had syphilis?" Or as he says in other words, syphilis renders the connective and vascular tissues of the liver more vulnerable to other exciting causes.

It is thought by some good authorities that syphilis is the cause of Bright's disease. Huchard says: "Interstitial nephritis, before becoming a disease of the kidney, is an affection of the cardio-arterial system."

Barker thinks that as syphilis is essentially a disease which affects the vascular system, it is rational to regard it as an important factor in the causation of Bright's disease.

Professor Poirier says<sup>1</sup>: "Everybody cannot have cancer of the tongue; two conditions are almost indispensable—you must be a smoker or syphilitic; and those who combine those two conditions, especially the latter, run a much greater risk than other people. Cancer of the tongue," he says, "might be called the cancer of syphilitic smokers."

Professor Fournier<sup>2</sup> finds that among one hundred and eighty-four cases of cancer of the mouth seen in his private practice, one hundred and fifty-five had decided syphilitic antecedents, a proportion of at least eighty-four per cent. In the twenty-nine other cases the antecedents were not given.

It has been suggested by Pernet that the spirochæta pallida swarms at night, and so may account for the nocturnal pains of syphilis. In some cases of neuritis, and especially in sciatica, if the pain is worse at night it is usually best relieved, I think, by antisyphilitic remedies.

In conclusion, gentlemen, I should like to say that no one is more conscious than myself of the shortcomings of this paper, and I sincerely thank you for your kindness, attention and patience. In the words of Faust:—

"Expression, graceful utterance is the first and best acquirement of the orator. This do I feel, and feel my want of it."

NOTE.—Since the above address was written the cultivation of the spirochætes has been carried out in the rabbit's eye through five generations, and finally inoculation into the monkey has produced syphilis.<sup>3</sup>

<sup>1</sup> *Brit. M. J.*, 1906, ii. 1668.

<sup>2</sup> *Ibid.*

<sup>3</sup> Bertarelli, *Zentralb. für Bakt.*, 1906-7.

SOME REMARKS ON SPINAL ANÆSTHESIA.  
AS BASED UPON THE PERSONAL OBSERVATION  
OF THIRTY CASES.

BY

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So much has recently been said and written on this subject, that I do not propose to attempt any review of the history and literature, but merely to record certain points of interest and difficulty that have occurred in actual practice. It is only by the noting of difficulties and drawbacks of any new method that these may be met and eventually overcome. The operations referred to are the following :—

|                          |                          |
|--------------------------|--------------------------|
| Colotomy .. .. . 2       | Bursæ .. .. . 2          |
| Hernia . . . . . 7       | Bone necrosis .. .. 3    |
| Intestinal obstruction 1 | Exostosis .. .. . 1      |
| Exploration of bladder 1 | Hammer toe .. .. . 1     |
| Extravasation of urine 1 | Amputation of toe .. 1   |
| Amputation of hip .. 2   | Varicose veins .. .. 4   |
| Hydrocele .. .. . 3      | Disease of ankle joint 1 |

The earliest of these operations was performed on September 9th, 1904, and was for an acute suppuration round the knee joint, in a girl of 18;  $\frac{1}{4}$  gr. cocaine was used and the result was very good. For the next ten cases the same method was followed. But it soon became evident that the method had great disadvantages, viz. grave danger during the anæsthesia and severe reaction afterwards, and these led to the abandoning of cocaine for stovaine, which was the agent used in all the rest of the cases. The cocaine cases were none of them of a serious character, and two instances will suffice to illustrate the drawbacks referred to.

J. W., man, aged 47. Radical operation for hydrocele.  $\frac{1}{4}$  gr. cocaine. Complete analgesia below navel; pulse fell to 72, and

became very irregular ; the face became ashy pale ; patient said he felt desperately ill. Soon revived after  $\frac{1}{2}$  oz. brandy, but had severe vomiting and headache afterwards.

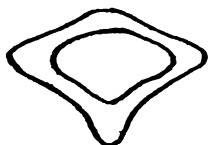
H. C., man, aged 29. Operation for removing a sequestrum from the femur.  $\frac{1}{4}$  gr. cocaine. Directly after the operation his temperature rose to  $104^{\circ}$  F. with a slight rigor. This was followed by vomiting and a severe pain in the head and back, which lasted about twenty-four hours.

These, I believe, are fairly typical of the troubles which occur during and after spinal cocainisation. In its toxic effects the drug, when used as a spinal anæsthetic, causes a slowing and irregularity of the pulse which may end fatally. And in its lesser degrees this phenomenon cannot be very rare, as I experienced it twice in eleven cases. The severe headache, backache and sharp rise of temperature with vomiting are quite as or even more severe than the after effects of a general anæsthetic, and these symptoms occur very frequently.

But the era of cocaine for spinal anæsthesia is now past, and its derivatives—stovaine, novococaine and tropacocaine—are on their trial. And it may, I think, be definitely stated that stovaine, at any rate, has been proved to avoid the dangers of cocaine, and the other drugs are even more highly spoken of, but they do not enter into the present series.

The first point to be raised is the certainty and completeness of the anæsthesia. Now this seems to depend chiefly on the possibility of injecting the fluid into the spinal sub-dural space, and this in its turn is indicated by obtaining a free flow of cerebrospinal fluid from the canula before injection. If the fluid can be obtained freely, then the occurrence of complete analgesia after an appropriate dose of the stovaine has been injected is certain. In four of my cases the fluid could not be obtained from the spine, and in all the anæsthesia was a failure, and in most published series there have been at least 3 per cent. of failures from the same cause. And if this cannot be remedied it constitutes a very great drawback, inasmuch as one can never be so certain of the spinal anæsthesia as to be able to dispense with an anæsthetist in cases of emergency which occur at a distance from help. And it is therefore worth while to consider the causes of this failure,

in order to see whether it can be avoided. If the vertebral column be cut across between the fourth and fifth lumbar vertebræ, and again between the second and third, the following appearances are noted inside the vertebral canal. In the former case the canal consists of a triangle about  $\frac{3}{4}$  in. across and  $\frac{1}{4}$  in. depth, whose basal angles are very narrow. The dura is, however, closely attached to the bone. In the latter case the canal is 1 in. wide and over  $\frac{1}{2}$  in. deep, with much more widely open angles. But here the dura is hardly attached to the bone at all, and if, therefore, there is not much tension in the sub-dural space, this



*Section of the vertebral canal and dura between the second and third lumbar vertebræ.*



*Section between the fourth and fifth vertebræ.*

space can easily be obliterated by the collapse of its walls. It is evident from these considerations that two causes may prevent a puncturing needle from withdrawing spinal fluid. First, the needle may not get into the vertebral canal at all, which is especially liable to occur in the lowest space; and, secondly, the needle may push the membranes in front of it, and then merely transfix the two layers of collapsed spinal theca. This is more likely to be the case in one of the upper lumbar intervals. I have found that the cases of failure have all been anæmic or old feeble people, in whom the tension of the spinal fluid is probably low. And in them also the ventricles of the brain are large, and the communication with the sub-dural space small, all of which factors would lessen the likelihood of the spinal fluid escaping from a puncture.

If these suggestions are correct, the following precautions must tend to lessen the chances of failure. First thrust the needle into the space between the fourth and fifth lumbar spines, this being indicated by the point midway between the highest points of the iliac crests. The needle should be very sharp and four inches long. It must be kept accurately in the mid-line, and

follow strictly the sagittal plane. If this fails, it is much better to try the space between the second and third vertebræ than to make repeated attempts in the same space. It should if possible, be done in the sitting or standing position with the head bent forward. The use of a needle provided with a trocar, and also with a lateral as well as a terminal opening, is to be recommended.

As regards the dose required, in most cases  $\frac{1}{2}$  c.c. of solution (1 mg. of stovaine) is sufficient; but the susceptibility of patients varies very much, and this dose will produce a prolonged total and extensive analgesia in one patient and only a short analgesia in another. So that in cases of abdominal disease, or those in which the operation is likely to last more than one hour, it is better to use double the above dose.

But, after all, the capacity of the measure to prevent shock is its chief advantage, and upon this its use in the future will probably depend. Six of my cases illustrate this point.

T. J., man, aged 52. Old case of traumatic stricture of the urethra. High grade of retention of urine for ten days with signs of renal sepsis. Extensive extravasation of urine, the parts being gangrenous and emphysematous. Pulse 140; temperature sub-normal. 1 c.c. stovaine injection. Multiple incisions and opening through the stricture into the bladder. General condition was unchanged during the operation, but he died about three hours later.

G. S., aged 63. Old inguinal hernia. Became strangulated nearly a week before admission to the Cossham Hospital. General condition bad; small, irregular pulse; some vomiting; abdomen distended; right inguinal hernia. At 4 p.m. gave 1 c.c. stovaine and operated. Six inches of gangrenous small intestine resected, but peritonitis evidently already existed, and he died six and a half hours later. The pulse fell to 108, and he seemed actually relieved during the operation.

J. K., man, aged 60. Acute spreading emphysematous gangrene of the right leg. 1 c.c. stovaine. Amputation through the hip-joint. Pulse and general condition was better directly after the operation, but he died three hours after.

A. G., boy, aged 19. Huge sarcoma of the adductor muscles of the right thigh.  $\frac{1}{2}$  c.c. stovaine. Amputation through the hip by the anterior racket method. The pulse and blood pressure were noted every ten minutes before, during and after the operation. The pulse dropped from 140 to 108, and the blood pressure from

115 m.m. to 70 m.m., and then rose to 74 m.m. He was bright, cheerful and constantly talking to the nurse. He complained once of feeling faint, but was better after a drink of water. A few hours after the operation he was bright and cheerful; his pulse remained at 108, but was rather small and compressible.

M. G., woman, aged 65. Had had colotomy performed eight months previously for cancer of the rectum. Intestinal obstruction had again occurred, and her abdomen was hugely distended with visible peristalsis.  $\frac{1}{2}$  c.c. stovaine. Median incision. Intestines matted together in the pelvis. Paul's tube tied into the small intestine. Died about twenty-four hours later.

E. A., aged 55. Strangulated right inguinal hernia; fæcal vomiting, great distension, and very poor general condition, the obstruction having lasted several days.  $\frac{1}{2}$  c.c. stovaine. A double loop of gut was strangulated, but not gangrenous; it was easily reduced. A very copious fluid motion, amounting to several pints, occurred on the table at the moment of reduction, and he became faint and collapsed. The whole operation only lasted twenty minutes, but he died an hour later.

These six cases represent, of course, the most desperate that can ever come under the surgeon's care, but for which an attempt must be made to save life. In four there can be no doubt that death would either have occurred on the table or without the return of consciousness. Spinal anæsthesia in such cases is of the utmost value. It almost entirely abolishes nerve shock, though of course it cannot prevent the effects of hemorrhage. It allows the patient full retention of his consciousness, and he can, at any rate, be safely returned to bed and see and speak with his relatives. And if it is possible for an operation in such desperate cases to succeed, it will have a far better chance than with general anæsthesia. With regard to the last case, I confess I am in great doubt. Other observers have noted the power of stovaine to produce intestinal contraction, and it would appear that in this instance the sudden evacuation of the bowels brought about the fatal collapse.

Then there are certain cases in which the presence of some other disease makes a general anæsthetic very dangerous. Such are particularly, severe lung diseases and diabetes. One example will illustrate this.

A. M., boy, aged 14. A congenital syphilitic, had double pneumonia, and an acute periostitis (probably pneumococcal)



of the left femur. Under  $\frac{1}{2}$  c.c. stovaine, the femur was cut down upon, and the bare bone exposed and drained. This had no ill-effect on his general condition, except that he had some retention of urine afterwards. He died from the pneumonia a week later.

As regards any ill-effects in the after history following stovaine anæsthesia, these are very rare. Headache, backache, vomiting or rise of temperature occur very seldom, and are almost negligible. In one instance, that of a man aged 52 with caries of the ankle-joint, an acute bed-sore developed three days later over the sacrum, and may have been due to some trophic effect of the spinal analgesia.

In conclusion, I would submit that stovaine-spinal-anæsthesia presents in ordinary uncomplicated cases no special advantage over general anæsthesia, and on the contrary has the drawbacks of an uncertainty of attainment in about 4 per cent. of cases, and of not allowing the actual dose to be graduated to suit the idiosyncrasies of the patient. But it is valuable under the following conditions in operations on the lower abdomen or legs:—

- (1) Operations involving the danger of great shock.
- (2) Operations performed in conditions of desperation, where it is doubtful that the patient will leave the table alive.
- (3) In severe diabetes, acetonuria or acid intoxication, severe lung diseases.
- (4) In emergency cases, *e.g.* a compound fracture or strangulated hernia, where an anæsthetist is unavailable.

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### THE VALUE OF COMPRESSION OF THE AORTA IN THE TREATMENT OF POST-PARTUM HEMORRHAGE.

(Continued.)

BY

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SINCE the publication in the June number of this *Journal*, Vol. XXV., p. 121, of a case illustrating the value of compression of the aorta in the treatment of post-partum hemorrhage, I have

received many communications bearing on different aspects of the question. The treatment of post-partum hemorrhage in general practice, owing to the conditions which prevail, will always be more curative than preventative, and the circumstances at the early part of this case illustrate a state of affairs bearing out this point, and common enough in general practice. The patient was seen by my assistant when the os admitted the tip of one finger, and the labour pains feeble and irregular. Bleeding had ceased, and had not been sufficient to produce any ill-effect on the general condition of the patient, and an anæsthetic was necessary. Owing to all these circumstances, delay occurred in immediately performing version. The manner of delivery did not predispose to post-partum hemorrhage. After version was performed and a leg brought through the os, beyond keeping the child on the lower uterine segment between the pains, no interference took place until the shoulders appeared, when delivery was completed in the usual way. The comparatively rapid delivery was due to the onset of strong and frequent labour pains after a leg was brought through the os, an easily dilatable os, and to the good down-bearing efforts of the patient. The patient was not kept deeply under the anæsthetic except during the time that version was being performed.

The reasons for recording the case were to show that manual compression of the aorta, despite the assertions to the contrary made in the recent debate on the subject, (1) is a practical measure; (2) that under certain conditions it is the only method that can be relied on for rescuing the patient from death; (3) and that it is not necessarily attended by harm when it is employed, (a) before delivery of the placenta for arresting hemorrhage between the second and third stages of labour, or (b) when it is employed after delivery of the placenta. The case recorded serves well to illustrate these points.

**Compression of the aorta as the primary part of the treatment of the hemorrhage occurring between the second and third stages of labour.** After a leg was brought through the os, no further bleeding occurred until the head was delivered. The hemorrhage at this stage was obviously due to partial separation of the

placenta, an incident usual when the placenta is implanted on the lower segment of the uterus. The usual proceeding in serious hemorrhage is straightway to resort to manual separation and removal of the placenta. The cause of hemorrhage, it is taught, must be removed at once. No rest is given the uterus, no opportunity afforded for natural separation of the placenta to take place; the hand is introduced into the uterus immediately, the placenta hurriedly removed. Nothing is done to obviate the necessity for this. Further, while manual removal of the placenta is being carried out, nothing is done to arrest hemorrhage; it is taken for granted that the patient will be none the worse for the additional loss of blood, and that as soon as the cause of the hemorrhage is removed the uterine forces will immediately become adequate, and remain so.

The conditions in this case demonstrate well the advantages of compression of the aorta as the primary part of the treatment of hemorrhage occurring in the interval between the second and third stages of labour.

1. It gave rest to the uterus, a desirable thing in all cases after the child is born, and especially when severe loss of blood has occurred. In the case under consideration, although there were no signs of inertia up to the time of delivery of the head, with the sharp bleeding which followed immediately, inertia appeared.

2. In addition to affording rest, compression of the aorta prevented the further exhaustion of the uterus, which would have occurred from the continued loss of blood which is inevitable until the uterus is emptied.

3. In virtue of this rest and recuperation, opportunity was given for natural separation of the placenta to take place. Complete separation of the placenta occurred within half an hour after the birth of the child, as was proved by exploration of the cavity of the uterus. Moderate pressure on the uterus was all that was required for the complete extrusion of the placenta.

4. Risk of sepsis was minimised. Owing to hurried removal of the placenta in the natural desire to remove it as quickly as possible when hemorrhage has been severe and the life of the patient is at a low ebb, small pieces of placenta are likely to be left

adhering to the uterine wall, and to be a source of sepsis subsequently. Scraping the placental site to remove such pieces of placenta is also not infrequently rendered necessary by hurried removal of the placenta. These sources of danger become much greater when the placenta is morbidly adherent. Although in this case it was necessary to explore the uterus owing to the ragged condition of the lower portion of the placenta, it is not always necessary to do so in cases of early partial separation of the placenta, careful examination of it after delivery alone being often quite sufficient to obviate the proceeding. Had it become necessary in this case to remove the placenta ultimately, with the hemorrhage arrested by compression of the aorta, the risks consequent on hurried removal would have been avoided.

5. Danger of subsequent hemorrhage from retained pieces of placenta, the result of hurried removal when bleeding is severe, was also avoided.

6. The danger to life from the additional hemorrhage when the placenta is removed manually and without any steps for the arrest of hemorrhage meanwhile, was also avoided. This danger is a very real one when the patient has been already seriously drained of blood, especially when the placenta is morbidly adherent. There was no obvious feature present in this case to show that the removal of the placenta could be accomplished without great loss of blood, and although bleeding might not have been great, it would certainly have added greatly to the peril of the patient. Prompt arrest of hemorrhage was of vital importance, as, in spite of immediate occlusion of the aorta when the hemorrhage occurred, the general condition of the patient at once became very grave.

7. In addition to treating shock by arresting hemorrhage, compression of the aorta also treated shock far more quickly and in a much more effectual manner by suppressing the circulation of blood in the lower extremities. The vital centres were thus kept better flushed with blood.

In view of all these facts, I think that compression of the aorta as the primary part of the treatment of the hemorrhage at this stage was the best step to take in this case. The result fully

justified its employment. At the time when its application took place the condition of the patient gave cause for great anxiety, her pulse rising rapidly from 130 to 150 and becoming threadlike, uterine inertia appearing, and signs of general collapse being present. After compression of the aorta, within three hours, the pulse had dropped to 120, the uterus had become firmly contracted, no bleeding occurring after releasing compression, and all signs of collapse had passed off. Compression lasted for about an hour.

**Compression of the aorta as the primary part of the treatment of the secondary post-partum hemorrhage.** The hemorrhage in this case occurred suddenly, after a period of over eight hours' freedom from bleeding. I regret that I omitted in my former paper to mention the circumstances which attended and appeared to determine the onset of secondary post-partum hemorrhage in this case. It was stated that the patient was of an excitable nature, and it was following an outburst of mental and physical excitement that the hemorrhage occurred. The uterus, it will be remembered, had been previously thoroughly explored; no placental remains were present, and the organ had been completely emptied, and good contraction and retraction secured. There was, therefore, no question of retained portions of placenta or chorion. As secondary post-partum hemorrhage is not uncommonly associated with mental and physical excitement, it is reasonable to assume that in this case the hemorrhage was due to separation of thrombi in the uterine sinuses, induced directly by such a cause. When the patient was seen shortly after the occurrence of the hemorrhage, she had already passed rapidly from faintness, restlessness, and air hunger to cyanosis, convulsion, unconsciousness, and loss of wrist-pulse; respiration had ceased, and the patient was apparently dead. She was lying in a pool of blood, and the uterus extended into the epigastrium, and was full of blood-clots. Massage at this time failed to evoke the slightest response. The uterus was immediately forcibly squeezed and emptied, and pressure then applied through the flaccid and attenuated organ on to the aorta, the feeble pulsation of which showed that life was not yet extinct. With the patient in this

moribund condition, any method of stimulating the uterus would have been utterly futile. Animation had first of all to be restored, and only prompt arrest of all bleeding and prompt and powerful treatment of shock and collapse could accomplish this. Hemorrhage could not have been arrested by endeavouring to rouse the uterine forces. Contraction and retraction, the securing of which we look on as the final end to be obtained for the permanent arrest of hemorrhage, were completely absent. These forces had first to be restored before they could take part in the arrest of the hemorrhage, and their restoration had to be complete if they were to be relied on for permanently arresting the hemorrhage. For the restoration of these forces, it was first of all necessary for all bleeding to cease. Clotting of the blood in the uterine vessels is the only means of arresting hemorrhage when contraction and retraction are absent. It was necessary to arrest bleeding immediately. The methods of inducing clotting, as advocated in text-books, aim at applying pressure to the bleeding part. The use of perchloride of iron injection is regarded as dangerous and uncertain, and is obsolete. Pressure on the placenta site by plugging the utero-vaginal canal would have been useless here, as its success depends on a certain amount of remaining energy in the uterus; and, again, it could not have been carried out completely before the patient died. Injection of hot water would also have been useless. Compression of the uterus is the method recommended for arresting hemorrhage when the uterine forces are completely exhausted. What were the chances of success of this method in this case at the time when compression of the aorta was adopted? There were several features present which rendered compression of the uterus an uncertain method for rescuing the patient.

1. Prompt arrest of hemorrhage was imperative. To have introduced the unsterilised hand into the vagina and apply pressure to the uterus, even although the hand was not introduced into the uterus, would have been to incur great risk of sepsis. The patient certainly must have died long before the aseptic ritual was complete.

2. The bleeding area was situated on the lower portion of the

lower uterine segment. Compression of the body of the uterus would not have ensured perfect pressure over the whole of the bleeding area for this reason, and for another which will be mentioned later. Compression of the uterus by pushing the cervix forward with one hand and anteflexing the body with the other, rarely finally arrests hemorrhage, and, as will be shown, did not admit of satisfactory application in this case. Compression with one hand inside the uterus on the placenta site and the other on the abdominal wall, is a very uncertain way of arresting hemorrhage when the uterine forces are entirely absent. The risk of sepsis being much greater than with any other method of compression, and owing to other circumstances present in this case, it could not be employed for arresting hemorrhage even temporarily.

3. The uterus extended into the epigastrium. It would have been perfectly impossible to compress such an unwieldy organ satisfactorily.

4. Notwithstanding prompt arrest of hemorrhage, contraction of the uterus did not reappear until after an hour's compression of the aorta, and it was not until some considerable time after this that contraction remained satisfactory. Owing to the desperate condition of the patient during the greater part of five hours, it was necessary to prevent any further loss of blood during this period. Compression of the uterus by any method cannot be kept up continuously for any length of time, and there is no certainty that loss of blood will not occur during the intervals of changing compressors.

5. Shock and collapse were extreme, and demanded prompt and powerful measures of treatment. Compression of the uterus alone would not have treated shock and collapse promptly and effectually enough in this case, and the life of the patient was at too low an ebb to have responded to such auxiliary measures as hypodermic administrations of strychnine, ether, &c.

Compression of the aorta was the only method that offered any chances of success in the treatment of the secondary post-partum hemorrhage in this case. The advantages of the method were well shown in this case. It could be applied immediately; its satis-

factory application was quite unaffected by the position of the placental site, or by the dimensions of the uterus ; it could remain continuously in action for many hours, pressure being maintained longer by one individual than can be in compression of the uterus, and the changing of compressors not being accompanied by loss of blood ; it treated shock promptly and much more powerfully than compression of the uterus would have done.

Twelve hours after the moribund condition of the patient, the pulse had dropped to 100, and was strong and fairly full, all signs of collapse had disappeared, the uterus was firmly contracted, and no bleeding whatever had occurred since its arrest at the beginning of this period. Death occurred from heart-failure due directly to sudden and violent exertion about fourteen hours after the cessation of bleeding. At the time of its occurrence no further bleeding took place, the uterus being firmly contracted, and remaining so.

The fact also that posture, bandaging of the extremities, and saline transfusion formed a part of the treatment of the case does not affect the chief points at issue. Although these measures were employed, and were of unquestionable value, compression of the aorta formed the most important part of the treatment ; without it nothing would have been accomplished. It might be argued that it would have been a better plan to douche out the uterus with hot water while the hemorrhage was arrested by compressing the aorta. The effect of hot water on severe hemorrhage cannot always be relied on, and in this case it would have been unwise to employ a measure which is not always certain.

**The objections to compression of the aorta.** The chief objection urged against its use is its alleged detrimental interference with the functions of the uterus by curtailing its blood supply.<sup>1</sup> Although the blood-supply of the uterus by the uterine arteries is prohibited when the aorta is occluded, on anatomical grounds, quite enough blood should reach the organ by the ovarian arteries to enable it to contract and retract to the extent necessary at least for the *separation* of the placenta, and for the complete arrest of hemorrhage. The portions of the uterus chiefly affected when

<sup>1</sup> Fitzgerald, *Practitioner*, 1906, lxxvii. 632.



occlusion of the aorta takes place are the cervix, the lower uterine segment, and the lower portion of the upper uterine segment. The fundus receives a large part of its blood-supply from the ovarian arteries<sup>1</sup>. Free anastomosis exists between the branches of the ovarian and uterine arteries, especially in the upper uterine segment. When occlusion of the aorta takes place, the supply of blood is greatest in that portion of the uterus in which muscularity is greatest. From an anatomical point of view, therefore, a fair amount of blood should find its way to that part of the uterus which is most concerned in contraction and retraction. The question is whether *actually* a sufficient amount of blood is supplied to the uterus when the aorta is occluded to allow of the contraction and retraction necessary for the expulsion and separation of the placenta, and for the arrest of hemorrhage. This case supplies abundant clinical evidence on the last two points. When compression of the aorta took place before delivery of the placenta, during its application the uterus was observed to contract. At the end of half an hour the placenta still remained undelivered. The uterus was then grasped with one hand and pressure applied on the fundus, and in the direction of the sacrum. This proceeding resulted in immediately effecting complete extrusion of the placenta. The pressure exerted was not unusually forcible, being about the same as is required when the placenta has separated and is merely lying in the lower uterine segment. The question of the placenta not having separated did not suggest itself, owing to the ease with which it was expressed. The reason for introducing the hand into the uterus after delivery of the placenta was because the lower portion of the placenta—the early detached portion—was in such a ragged condition. As has been mentioned, there were no placental remains found when the uterus was explored, and this fact supports the conclusion that complete separation had occurred when expression took place. That the application of compression of the aorta before delivery of the placenta, and in the treatment of the secondary post-partum hemorrhage, did not interfere with the contraction and retraction necessary for arresting hemorrhage, is clearly proved by the record

<sup>1</sup> Jellet, *Manual of Midwifery*, 1905, p. 47.

of events. When compression was used before delivery of the placenta, no hemorrhage followed the release of compression, and an interval of eight hours' freedom from hemorrhage ensued, and the cause of the hemorrhage at the end of this period was quite unconnected with compression of the aorta. When compression was employed in the treatment of the secondary post-partum hemorrhage, contraction and retraction were completely absent. After an hour's compression, and during its application, the uterus hardened, became smaller, and massage, which previous to compression of the aorta failed to produce any effect, soon succeeded in bringing about firm contraction. No bleeding followed the release of compression. Further, the contraction and retraction resulting remained perfectly adequate up to the time of the patient's death, from heart-failure, eight hours after the discontinuance of compression. These forces indeed must have been unusually adequate, for in spite of the patient jumping out of bed, the loss of less than a tablespoonful of blood followed the incident. Even after death the uterus was still firmly contracted.

I think, therefore, that conclusive evidence was furnished that compression of the aorta did not affect injuriously the contractile and retractile functions of the uterus in their power for accomplishing separation of the placenta, and for arresting hemorrhage, either when its application took place before or after delivery of the placenta. The evidence derived from this case on these points is very valuable. The fact that the placenta separated naturally, and that contraction and retraction, which were previously completely absent, reappeared, and in spite of five hours' occlusion of the aorta, remained permanently adequate, is sufficient proof that compression of the aorta I think did not interfere with the power of the uterus for affecting separation of the placenta and for arresting hemorrhage.

The irksomeness of the method is another objection that has been brought against compression of the aorta. The maintenance of adequate pressure is not as irksome as would appear to those who have not employed compression of the aorta. It is certainly very much easier to keep up effectual pressure on the aorta than it is to compress the uterus bi-manually for even a short

time. Although it was necessary in this case to keep up pressure for five hours, the circumstances were exceptional, one hour's compression being an outside limit in most cases, according to those who have used the method frequently.<sup>1</sup> An intelligent nurse can easily apply pressure, and as it is easy to prevent loss of blood when changing compressors—the new-comer placing the fist above or below that of the compressor before the latter releases pressure—no disadvantage attaches to changing compressors as often as may be necessary. The danger of reactionary hemorrhage and of syncope following the discontinuance of compression are avoided by withdrawing pressure gradually. With regard to the other objections brought forward, these are not of great importance, being easily overcome if compression is properly employed. These objections and the means of overcoming them were mentioned in my former paper.

In conclusion, I may say that I have used compression of the aorta on another occasion since in consultation, and this further experience has served to strengthen the conclusions arrived at in this case. The method as the primary part of the treatment of hemorrhage between the second and third stages of labour, due to partial separation of the placenta, possesses great advantages over immediate manual separation of the placenta, in those cases where serious exhaustion has been produced from tedious labour or loss of blood. If, after waiting half an hour, the placenta is not expelled naturally no harm is done, hemorrhage being arrested; on the contrary, rest is given the tired uterus. Pressure on the uterus can then be tried, and if this fails to expel the placenta, or if the expressed placenta is incomplete, the uterus can then be emptied by introducing the hand, compression of the aorta continuing until the organ is completely emptied, and contraction and retraction complete.

<sup>1</sup> Stanmore Bishop, *Practitioner*, 1906, lxxvii.

# A CASE OF GENERALISED SARCOMA, WITH BLOOD CHANGES.

BY

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JESSIE, æt. 21, under the care of Dr. Maynard. Patient was admitted on 24th September, 1906, for severe epistaxis and a hemorrhagic and purpuric eruption. There was a history of epistaxis occasionally for years. She was taken ill suddenly three weeks previous to admission with sickness and vomiting. On admission, there was considerable anæmia. There were enlarged, softish glands in the neck and axillæ. The splenic dulness extended to the costal margin, and the liver dulness from fourth rib to one finger's breadth below border of ribs. There was a hard, slightly movable, tender, nodular mass of tumour in the pelvis to each side of middle line, with a general tenseness of abdomen. The breasts were very tense, hard and nodular, and were said to have been so for three weeks. There were hemorrhagic purpuric spots on the arms and legs.

The temperature was 101.6° on admission. It rose on 26th September, 1906, to 106.2°, with a severe rigor. The patient died on the 27th September, 1906, at 2 a.m.

*Post-mortem findings* (by Dr. Nockald).—Malignant new growth of ovaries, retroperitoneal glands, mesentery, omentum, portal fissure, liver and breasts, peritoneal effusion, subcutaneous and petechial hemorrhages.

The thoracic viscera were not examined, permission being refused. For this reason also a limited examination of the bone-marrow could only be made.

The subject was a well nourished girl. There were numerous subcutaneous hemorrhages, especially on the outer side of the left leg, and on the inner side of the right leg. There was also a petechial eruption, most marked on the legs. On opening the abdomen, a moderate quantity of dark yellow fluid was found in the peritoneal cavity. The great omentum was matted together, and contained masses of what appeared to be new growth. These were diffuse, and on section had a pearly lustre and showed hemorrhages. The mesentery had undergone a similar change, which was generally most marked near the intestine. The iliac glands on the left side were not distinguishable as such, but their site was occupied by

a large mass of growth similar to that in the omentum and mesentery, which reached from the fourth lumbar vertebra along the brim of the pelvis almost to the pubic bones.

The right ovary was large and nodulated, firm in consistence, and showed a blood cyst about two cm. diameter on the surface. It was not adherent to any of the surrounding structures. On section, the mass was solid, tough, and showed hemorrhages, and had all the appearance of a sarcoma. There were no naked-eye evidences of ovarian tissue. The left ovary was similar in appearance to the right, but only about half the size.

There were small masses of growth beneath the peritoneal covering of the uterus, particularly on the posterior surface. The cavity of the uterus was somewhat larger than normal. The vagina was normal, also the kidneys and supra-renal capsules.

The liver was rather pale; the hilum contained masses of new growth. The gall-bladder was very thickened, apparently by inflammatory change (microscopically, this was seen to be sarcomatous). The spleen was slightly enlarged, but externally and on section was normal.

The breasts were firm, and contained numerous nodular, rather hard masses, which resembled new growth on section, and were hemorrhagic. Glandular breast tissue was seen between the nodules.

*Microscopic examination.*—The blood, ovaries, lymph glands, mesentery, oviduct, uterus, liver, gall-bladder, marrow and breasts were examined microscopically by ordinary (hæmatoxylin and eosin, Van Giesen) stains, by Pappenheim's pyronin methyl green, by Leishman's blood stain, and by eosin methylene blue stain in order to study the nature of the neoplasm and its relationship, if any, to inflammatory tissue, or to the lymphocytes of the blood. Micro-organisms, too, were searched for by Gram-Weigert's method of staining, but cultures of the blood were inadvertently not made before or after death.

The ovaries show polyhedral or rounded cells, with large nuclei and small amount of cytoplasm; rarely they are swollen and dropsical. The latter usually is acidophilous. Between the cells are delicate fibrils; in places the arrangement is alveolar. There are areas of degeneration and hemorrhages. In places there is a loose connective tissue with round or spindle cells, and red-blood cells are present. There are many thin-walled blood vessels.

*The breast.*—The fat or fibrous tissue is diffusely, and in places densely, infiltrated with large rounded cells resembling those in ovaries and is vascular, very necrotic and hemorrhagic.

*The liver.*—The portal fissure is the seat of a round-cell growth, which diffusely penetrates the liver and its capillaries; the periportal tissue is infiltrated far away from the fissure.

*The mesentery and omentum* show growths of polygonal cells

infiltrating the fat. The cells have large nuclei, with granules of chromatin and a thin rim of protoplasm.

The walls of the gall-bladder and the folds of its mucosa are infiltrated densely with round cells.

The oviduct (left near ampulla) has undergone sarcomatous change; also the iliac glands.

There is sarcomatous tissue between the uterus and bladder, and diffusely throughout the pelvic viscera. The rib marrow was fatty.

Some of the cells are large, with two or more nuclei, but there are no large giant cells. As a rule, the cells are larger than mature lymphocytes.

No leucocytes or plasma cells appear.

The patient died three days after admission, and the day before death had 50 per cent. hæmoglobin, 2,960,000 red cells and 13,400 white cells, with a colour index of 0.83, and 1 white to 222 red cells. There was a marked relative lymphocytosis.

*Blood examination.*—Hæmoglobin, 50 per cent.; reds, 2,960,000; whites, 13,400; colour index, 0.83; white to red, 1 to 222. Polynuclears, 13.0; large lymphocytes, 37.3; small lymphocytes, 29.1; transitionals, 12.6; eosinophil polynuclears, 1; myelocytes, 3.4; large hyaline, 2.1.

This case is one of great interest, as it illustrates the close association of sarcomata and blood diseases. I have seen lymphocythæmia with deposits in the liver, kidney and marrow, and not markedly affecting the lymph glands; and again lymphocythæmia has been found with malignant mediastinal growths. Lymphadenoma has recently been described showing malignant (sarcomatous) infiltration of adjacent structures, and lymphosarcoma and sarcoma are found to occur with or without relative white cell changes in the blood. Daniels says that sarcomata always possess a stroma; otherwise lymphosarcoma is characterised by continuous infiltration, suggesting a direct infection by lymph paths, whereas sarcoma is said to form metastases more frequently. (The distinction of lymphosarcoma from Hodgkin's disease by the infiltration of the lung in the former can no longer be maintained.)

I would place our case among the sarcomata, though I admit that the various deposits were not proved to be truly "metastatic" beyond doubt. It is characterised by the marked "relative lymphocytosis" of the blood of the large cell type, by its hemorrhagic eruption, and its diffuse growth (as seen in the mesentery, omentum and portal fissure of liver). It is thus

illustrative of the sarcomata which are at one end of the scale, of which lymphocythæmia is at the other. This supports the view taken by Banti that both myeloid and lymphatic leukæmias are true tumour developments, a sarcomatosis of medullary and lymphatic elements respectively. Banti believes a lymphocytosis may be mistaken for a discharge of sarcoma cells. It is suggested by Salaman that the clinical differences in these cases are physiological, and depend on the stage of development of the lymph-cell forming the tumours, in some cases resembling the finished lymphocyte; in others, and more malignant ones (as this of ours), resembling the lymphogonia of the germinal centres.

The sarcomatous nature of infective venereal tumours in dogs was described at the last meeting of the Pathological Society of Great Britain and Ireland, and has been confirmed by Seligmann. (They are similar to those described by Bellingham-Smith and Washbourne.) They are not the result of direct extension only, but may show true metastasis (*e.g.* into the testis). These tumours are then, as Hoch says, contagious malignant neoplasms, usually locally malignant. Our case showed no disease of vulva or vagina, and there is no evidence to place it in this category.

The connection between the sarcomatosis and the cutaneous hemorrhages is unknown. Engel Martens and Douglas obtained experimentally no specific precipitation of blood to cancer. Von Dungern, Beebe and Pearce, in the *Journal of Experimental Medicine* (vol. 7), have shown that hæmolytic and hæmagglutinative properties exist in a serum obtained by injection of various crushed tissues, mixed with blood, into an animal. It is possible such anti-bodies were circulating in this patient's blood; and if so, their presence was dependent on an affection of the blood itself.

Whether the blood was altered in its alkali content is not known. Neither did I find evidence of the phenomena observed by Farmer, Wallien, and Moore in the leucocytes in the active zone around early cancers. These indicated an interchange between the chromosomes of the daughter nuclei of the leucocytes

and tissue cells after mitosis. No evidence of an infectious nature, or of "evolutionary" changes in the tissues, was observed. That Nature has some function for this apparently purposeless proliferation is certain.

A word may be said as to nomenclature of this disease. Warthin suggests "leucoblastomata"—based on Powell White's classification apparently—and "malignant lymphomata" or "multiple sarcomata," and "sarcomatosis" are suggested (among others) by some authorities.

In respect to the relation of lymphosarcoma to Hodgkin's disease, Gibbons records nine cases of Hodgkin's disease, with five autopsies, in which the blood picture was normal, and there were no relative changes in leucocytes. The glands showed the proliferation of the germ centres of follicles and endothelium of sinuses, and presence of giant cells, eosinophils, and a few plasma or polymorphonuclear cells, with changes in connective tissue structure, as described by Reed and Longcope, Simmons, and others. In the hard variety peculiar giant cells and small lymphocytes are striking features. The capsules *showed* infiltration, and even penetration (and incidentally the capsules were seen to be secondary envelopes). The muscle cells may be invaded, destroying them, or the submaxillary gland be invaded. The metastases present certain features of lymph glands; the boundaries usually are sharply defined, but without a capsule, and may infiltrate and destroy tissues around. In the spleen they may appear in Malpighian bodies, and stretch out as ill-defined nodules into the pulp.

The metastases in the lungs showed that they were not alone developments of pre-existing lymphoid tissue in organ, but malignant metastases pushing into adjacent tissue and destroying it. They occurred, too, in the lower lobe, and away from a bronchus.

The five autopsies of nine cases showed involvement of lymph glands all over the body, with metastases in liver in four, in spleen in four, in kidney in two, in lungs, pericardium and pancreas in one each. Of other four not coming to *post mortem*, one showed involvement of all the external glands.



In lymphadenoma Andrewes describes a loss of all germ centres, diminution of lymphocytes, increase of reticulum, and the presence of eosinophil cells and giant cells. Thus lymphocytes, lymphoid tissue, and connective tissue may be affected by a proliferation which can only be described as malignant, and lymphocytes, plasma cells and fibroblasts have been observed to be stages of growth by which wandering blood cells become fixed tissue cells.

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## PROPORTIONAL REPRESENTATION AND THE COMPARISON OF RADIOGRAPHS.

BY

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NOT only does the radiograph of any part of the body need interpretation singly, but it may as regards the outlines depicted require to be compared with any other of the same part in others as one of a series of cases. In the attempts made up to now to adapt the radiographic art to clinical uses, one essential principle at least seems to have been almost entirely ignored, namely that (for reliable comparison of radiographs of corresponding parts) the distance of the focus tube from the parts to be represented should be proportioned to the size of these parts. In other words, corresponding parts of objects differing in size must be radiographed under equal angles if the resulting radiographs are to be at all comparable one with another.

The possibility at all of clinical radiography rests on the underlying assumption—till it is disproved—that in persons who are about the same age, and who are of the same sex, and of the same degree of fatness and leanness, but who differ in size, the corresponding regions of the body are in the geometrical sense *similar* to one another in their dimensions—that is, are enlarged or diminished models of each other—except in so far as their proportions may be altered by the effects of disease or of

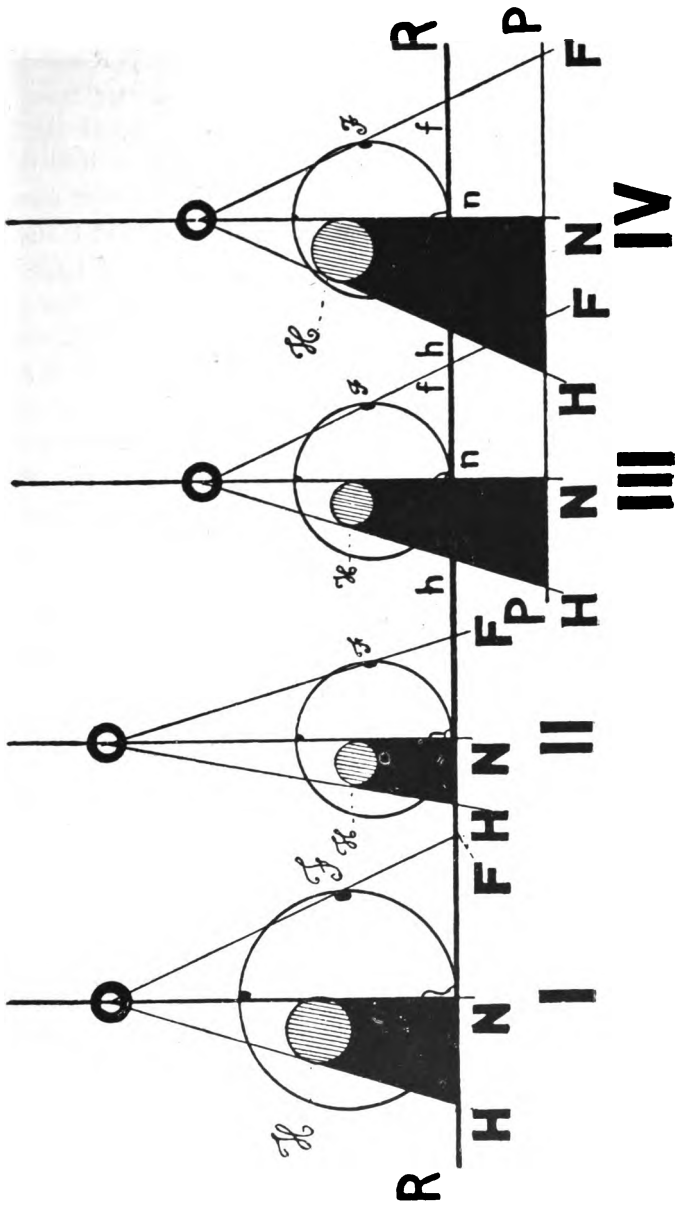
injury, or it may be by movement. This assumption is probably rarely quite true over the whole body, as where, for example, the man 5 feet 8 inches in height takes "tens" in boots, while his friend, who measures 5 feet 10 inches, gets along comfortably with "eight and a half." Yet so far as the feet are concerned, the bony skeletons of the larger feet are probably more likely to be *similar* to those of the smaller, each to each, than the containing pairs of boots, though these might very well be so too. One cuboid bone is to be regarded anatomically as *similar* to another. The assumption is probably approximately true in reference to the bones and bony distances of such segments of the axial and appendicular skeleton, and to such organs as the liver and heart, as are likely to come within the purview of the radiographer. According to this assumption, if we take two normal frozen bodies of the same age, sex and build, but differing in size, and if we make sections through them in various directions, we would expect on the surfaces of any pair of sections made in the same direction to be able to draw any number of triangles we please by a network of intersecting lines drawn between points corresponding anatomically, and we would expect to find by measurement that each triangle in the larger or smaller section would be *similar* respectively to the corresponding triangle in the smaller or larger section in every parallel pair of sections cut. Any dissimilarity observed would be the mark of abnormality.

But if this fundamental assumption be proved untrue, then there is an end at once to any exact use of radiography by the clinical surgeon or by the clinical physician. Nevertheless, for the purposes of the present argument, it is held to be *prima facie* true, and my present contention is that for proper comparison of radiographs *similar* parts in subjects of different size must be X-rayed under equal angles, that is at a distance of the focus tube from the parts proportional to the size of the parts.

In X-raying a part of the body for diagnosis, we virtually run a sheaf of sections simultaneously through the part of the body under examination, these sections being innumerable and radiating through a common Axis (the radiographic Axis),

namely the particular ray that passes through the centre of the object we wish to take. At the same moment we *project* a sort of linear image of some of the contents of each intervening section upon the intersecting plane of delineation (plate or screen) by means of such of the rays emanating from the anticathodal point of emission (the radiographic Centre) as may survive the obstacles in their path. In radiographing for comparison the same region in a small man and a large one of the same age and build, if the Axis passes through corresponding anatomical points and the Centre is *similarly* situated to the parts, then the two resulting radiographs will be *similar* the one to the other on all parallel planes of delineation; and if the distance of the plane of delineation from the Centre of the focus tube in the one case is *equal* to the distance of the plane of delineation from the Centre of the focus tube in the other, then the resulting radiographs (barring morbid changes of size and shape) will not only be *similar* but *equal in every respect*, as might be proved by actual superposition. In geometrical parlance, the *projections* of *similar* solids on parallel planes by points *similarly* situated are *similar*, and may be *equal*.

In illustration of the foregoing remarks, I have tried in the accompanying diagram to show, as simply as possible, by means of four very conventional figures, what one might expect to find radiographically in the case of corresponding sections of three individuals, one of whom is larger than the other two, these two being equal in size externally. The larger circles represent sections of the thorax made transversely to the long Axis of the body, about the level of the fourth costal cartilage in front and the ninth dorsal vertebra behind, viewed from above. The smaller enclosed shaded circles represent the respective hearts. O is in each case the anticathodal Centre of emission, and O N is the radiographic Axis, drawn in each case through the right border of the sternum in front, and a point on the right side of the body of the ninth dorsal vertebra, proportionally distant from the mesial plane of the body. This Axis touches the right border of the heart, known to be *similarly* situated in I., II. and III. \* is the extreme limit to the right



at the level chosen of the thoracic cage, namely an angular portion of the shaft of the fifth rib. The line R R represents the radiographic plane of delineation; the shorter transverse line P P parallel to the last, a plane of photographic enlargement of the radiographs in III. and IV., producing as it were (by appropriate use of the enlarging camera) the primary image in the X-ray plate to the same scale as the radiographs in I. and II.; O N (that is the distance of Centre from P P) in III. and IV. being made equal to O N in I. and II. (that is the distance of Centre from R R). The black represents in each case the shadow or *projection* H N and h n of the opaque hearts; and N F and n f the projection of  $\mathcal{S}$  and of all the intervening space between O N or O n and O F or O f. In all these cases the radiographic plate or screen is supposed to be as close to the posterior wall of the thorax as possible, *i.e.* in contact with the body according to the prevailing practice to secure greatest degree of clearness of image—and the Axis to be at right angles (what is called *normal*) to R R, so that when the radiographs were taken the distances between O and the remotest part of the body from O along the Axis and the distance of O from the plate coincided. It need not, however, have been so; theoretically for comparability of results the essential distance is the distance of O from the body at N (I. and II.) and n (III. and IV.); and the essential in regard to the plates is that they should be parallel to each other. Nevertheless it is of the highest practical convenience that the plates should be at right angles to the Axis at N, and as near N as possible. The distance of the parallel plates or screens from O is not essential as a matter of geometry, though it is of great importance for shortness of exposure that this distance should be as small as possible; but we do find that when the distance of the plate from O in one case is equal to what it is in another, then the two plates are on the same scale, and can be compared by superposition, provided always that the axial distance of the object from O in the one case is to that of the other *similarly* proportioned to the respective size of the objects.

In I. and IV. the hearts are equal in size; II. and III. are representations of the same individual.

In I. the axial distance of O from the remotest part of the body has been purposely made equal to twice the distance of  $\mathcal{S}$ , from the tip of the spine of the eighth dorsal vertebra. It might, of course (subject to technical difficulties) have been made any other multiple of any other distance between bony landmarks; in practice (so long as we stick to the same multiple or sub-multiple of corresponding distances) no doubt in future it will be found convenient to take the distance between O and the nearest point of the body along the Axis, and make it proportional to the thickness of the body perpendicular to the plate. In II. the axial distance of O from the remote part of the body is the same length as in I.; but in III. and IV. the axial distance of O from the remote part of these bodies is a length the same multiple of the distance of  $\mathcal{S}$  from the eighth dorsal spine of these bodies, as ON is of the corresponding distance of  $\mathcal{S}$  there in IV. from the eighth dorsal spine of that body, namely 2.

These elements will be found tabulated in the annexed paradigm. The unit of measurement employed would amount to about a quarter of an inch in an actual radiograph of the chest.

Now it is evident that from the actual radiographs I., II., III. and IV., different radiographic experts would come to different conclusions with more or less reason on their side.

For instance, one radiographer would carefully measure HN and hn; he would make out the heart in III. to be somewhat and the hearts in I. and IV. greatly enlarged, taking no doubt the heart in II. as the normal, and acting on that curious principle in the morbid anatomy of the heart, whereby hearts always appear to be larger and never smaller than each other. But II. and III. are the same person; therefore the same object is at the same time larger and smaller, which is absurd. Another expert more philosophically would go by the ratios of HN or hn to NF or nf, NF and nf being the projections of ascertainable parts. He would probably make II. the standard, and regard the hearts of I. and III. as "equally enlarged" and of IV. as greatly so. On its being pointed out to him that II. and III. were from the same original, he would at once ask for the

## PARADIGM. SOME ELEMENTS OF THE DIAGRAM COMPARED.

| Individuals. | Figure. | Plane of Delineation.           | Dimensions of Shadow. | Ratio of Dimensions of Shadow to projection of $\mathcal{S}$ | Axial distance of Anticathodical Centre from remote point of individual. | Normal distance of Anticathodical Centre from plates. | Distances of fifth right rib from spine of eighth Dorsal Vertebrae. |
|--------------|---------|---------------------------------|-----------------------|--|--|---|---|
| 1            | I.      | R R<br>Radiographic             | $HN = 33$             | $\frac{HN}{NF} = \frac{33}{50}$                              | 2 D  | 2 D   | $= D = 53$  |
| 2            | II.     | R R<br>Radiographic             | $HN = 20$             | $\frac{HN}{NF} = \frac{20}{32} = \frac{31}{50}$              | 2 D  | 2 D   | $= d = 38$  |
| 2            | III.    | R R<br>Radiographic             | $hn = 29$             | $\frac{hn}{nf} = \frac{29}{36} = \frac{33}{50}$              | 2 d  | 2 d   | $= d = 38$  |
| 2            | III.    | P P<br>Photographic enlargement | $HN = 33$             | $\frac{HN}{NF} = \frac{33}{50}$                              | 2 d  | 2 D   | $= d = 38$  |
| 3            | IV.     | R R<br>Radiographic             | $hn = 35$             | $\frac{hn}{nf} = \frac{35}{36} = \frac{49}{50}$              | 2 d  | 2 d   | $= d = 38$  |
| 3            | IV.     | P P<br>Photographic enlargement | $HN = 49$             | $\frac{HN}{NF} = \frac{49}{50}$                              | 2 d  | 2 D   | $= d = 38$  |

distance of O from the plate in each case ; and on learning that O N and O N in I. and II. were *equal*, and that O n and O n in III. and IV. were *equal* to each other, but shorter than O N in the other pair, he would put I. and II. apart from III. and IV. as belonging to two series not comparable with each other, and proceed to X-ray IV. anew, making the distance of O from n therein *equal* to what it was in I. and II.

How, then, are these discrepancies to be reconciled ? To avoid a task for which I feel personally unfitted of a rigid mathematical demonstration, I now venture under the form of an apologue to introduce a semi-mythical personage, whose methods of procedure are not unfamiliar to the readers of this *Journal*.

In a certain far country, lying towards the Great River, even the River Euphrates, there lived two learned hâkim or physicians. The one of them belonged to the sect of the millimetrists, the other relied on what he called common sense. Both had graduated and postgraduated with credit at a northern university of the Giaour, and had returned to practice the arts of medicine among their confiding kinsfolk at home. These two had met for the purpose of comparing some radiographs they had taken in the case of two or three of their patients. The patients complained of symptoms compatible either with indigestion or heart disease. The radiographs resembled the hypothetical cases of my text, and the two learned physicians came almost to blows over the very discordant indications thereon. At last, staggered by the discovery that II. and III. were from a patient whom they were both attending to at the same time, unknown to each other, they at length agreed to lay their differences before a certain wise man named Zadig, who had a great local reputation for setting down disputants and putting a full stop to people's troubles, and, in short, for seeing farther into a haystack than most. The last, having heard what they had to say with true oriental politeness, and having elicited from them some such particulars as these I have tabulated, retired into a small obscure chamber in the interior of his dwelling. There, having lighted a little taper of wax (which he kept near his bedside during the hours of darkness in case of being aroused by the



robbers who infested that neighbourhood), he proceeded to throw on the white walls of his dark room the shadows of a sheep's heart and of some ribs of mutton (carefully denuded of flesh), which he happened to have by him. In doing so he watched attentively the various grazing contours made by his little cone of light upon the objects in his hand, as he passed his taper to and fro and back and forth. Having again emerged to the light of day, he sat awhile meditating, and drew on the sand with a twig some such diagrams like to those on page 329. Then slightly closing one eye, he thus addressed his expectant listeners in the sententious manner affected by eastern pundits :—

“ Brothers, peace be with you. It is vain to fight about shadows. Life is short, art is long, and a straight line is the shortest. Truth lies on both sides. Clearly, my brethren, in II. the triangle  $OHN$  is not comparable with the triangles  $OHn$  and  $Ohn$  in I., III. or IV., nor the triangle  $ONF$  there with  $ONf$  and  $Onf$  in the others, the two angles at  $O$  in II. being respectively unequal to the corresponding angles at  $O$  in the other three figures. Hence in II. the ratio of  $HN$  to  $NF$  cannot be compared to the ratio of  $HN$  to  $NF$  or of  $Hn$  to  $nf$  in I., III. or IV., or in any other figures taken with the same proportional distance of  $O$  from the object, as in I., III. or IV. So, friends, you had best lay aside the radiograph II. ; it is but a single term of another series ; for I do now perceive, that the heart being unto X-rays a smooth and globular organ, unless it be radiographed under the same angle at  $O$  in all cases, it is the shadow of a different profile that will be cast in each case. Whereunto let the stereoscopists take heed.

“ But in I. and III. the triangles  $OHN$  and  $Ohn$  are both *similar* to each other, and likewise the triangles  $ONF$  and  $onf$  ; so that  $HN : NF :: hn : nf$ . So I conclude that the hearts in these two men are not disproportionately enlarged as compared with the rest of their chests ; and I prognosticate that they will do well whenever you do cease to treat them. Praise be to Allah ! hearts are trumps, not spades. Further, I do reckon that the size of the heart in the one is to the size of the heart in the other directly as the size of the thorax in each.

“ But in regard to the original of IV., I perceive he is in a very bad way, for I doubt not his heart is either much larger than it ought to be, or else it protrudeth out through the front of his bosom. If he live long enough, he will surely die. For though the triangles  $O H N$  and  $O h n$  in IV. are *dissimilar* to  $O H N$  and  $O h n$  in I. and III., yet verily the triangles  $O N F$  and  $O n f$  in I., III. and IV. are to each other *similar*, and the ratio of  $H N$  to  $N F$  and of  $h n$  to  $n f$  in IV. is much greater than the ratio of  $H N$  to  $N F$  and of  $h n$  to  $n f$  in I. and III. Nevertheless, I cannot tell you how much larger the heart of IV. is than the hearts of I. and III., unless you can assure me that the right border of the heart in IV. is *similarly* situated to that of the right border of the heart in I. and III.”

So they prostrated themselves at the feet of the master, and departed marvelling, and disputing vehemently how they were to carry out the sage's behests, namely how in the case of IV. they might best make an angle  $h O n$  equal to the angle  $H O N$  or  $h O n$  in I. and III., in the new radiograph that they had it in their minds to make as Zadig commanded them.

Here the original MSS. becomes indecipherable, and the question remains, How did they manage to do it ?

To sum up, in radiographing the same part in different people, with the view of detecting the presence of dissimilarity by comparison of the members of the series one with another, I think it could be proved (a) that three things are geometrically necessary, and (b) that three things are radiographically expedient :—

- (a) 1. The Axis must be directed through the same anatomical points ; one point is not sufficient.
2. The distance of the radiographic Centre from the part must be proportioned to the size of the part.
3. The planes of delineation must be parallel.
- (b) 1. The plates or screens should be at right angles to the Axis, anatomically defined as above.
2. The distance of the plate or screen from the part should be as short as possible.

3. The resulting radiographs might with advantage be photographically enlarged (or diminished) to the same scale.

Although no doubt some apology is due from me to the mathematically inclined for a rather crude exposition of the doctrine of *similar* triangles, I trust this somewhat theoretical essay may lead to simpler methods of solving by radiographic delineation some perplexing clinical problems. Nor am I unmindful of the vexatious limitations imposed up to now on the X-ray worker by practical exigencies peculiar to the employment of the Röntgen rays in diagnosis. Yet any fine morning these technical difficulties may be overcome, and then a correct system of radiography will become of enormous importance. The risk of an incorrect system is not so much in missing excessive enlargement or displacement of parts, as in imagining abnormality to exist where it does not, or of failing to detect the lesser abnormalities. Till such a system be brought into uniform use, the medical witness would be wise to maintain in a court of law a *critical* attitude towards radiographs produced for his opinion, where he has not the means of checking the manner of their production in regard to the relative positions of Centre, Axis, Plate and Object.

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### PUBLIC HEALTH IN BRISTOL, 1906-7.

BY

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THE general health returns, which were very favourable for the year 1906, have continued to be satisfactory during the first three quarters of 1907.

*The recorded death-rate for the year 1906 was 14.5 per 1,000,*

compared with a rate of 14.7 for the previous year, and with a rate for the seventy-six large towns of England and Wales of 15.9.

The rates for the four quarters of 1906, and for the three completed quarters of 1907, are here shown for comparison :—

|                   | 1906. |    | 1907. |
|-------------------|-------|----|-------|
| 1st Quarter .. .. | 16.84 | .. | 17.40 |
| 2nd Quarter .. .. | 13.66 | .. | 12.58 |
| 3rd Quarter .. .. | 13.10 | .. | 10.24 |
| 4th Quarter .. .. | 14.79 | .. | —     |

The **birth-rate** for 1906 was 25.8, a decrease on that of the previous year. This rate has shown an almost uninterrupted decline since 1882. The **annual marriage-rate** is also decreasing.

**Infant Mortality.**—The proportion of deaths of infants under one year to births in 1906 was 127 per 1,000, which is somewhat higher than that for the previous year (122). The highest rates were noted in Bristol Central, 173, St. Philip, 153, and the lowest in Ashley, 79. The general infantile rate is satisfactory, compared with 145 recorded in the seventy-six large towns of England and Wales, but the most crowded districts are susceptible of improvement.

The infant mortality rates for the four quarters of 1906, and for the three completed quarters of 1907, are here given for comparison :—

|                   | 1906. |    | 1907. |
|-------------------|-------|----|-------|
| 1st Quarter .. .. | 148   | .. | 118   |
| 2nd Quarter .. .. | 93    | .. | 88    |
| 3rd Quarter .. .. | 156   | .. | 99    |
| 4th Quarter .. .. | 111   | .. | —     |

The influence of a somewhat damp and cold summer and early autumn is apparent in the diminution shown in the third quarter of 1907, chiefly due to the small amount of infantile diarrhoea.

**The chief epidemic diseases.**—There has been no notable occurrence in regard to these diseases.

*Scarlet fever*, while still occurring in scattered cases, is generally of a mild type, and gives rise to little mortality.

*Diphtheria*, while distinctly less fatal than in the period 1900-04, still persists, and occasionally shows severe forms; but the tendency to form school outbreaks has declined, and children at susceptible ages appear to have acquired considerable immunity.

*Enteric fever*.—This disease only occurred in sporadic form in 1906, except in the Bristol Central District, where an outbreak centred round a shell-fish shop receiving supplies from a tidal river in South Wales. The type of case was severe, but the outbreak did not assume alarming dimensions.

A continuing outbreak at a "home" in the city is at present (November, 1907) engaging attention. For some months case after case has continued to crop up at intervals, in spite of every usual precaution. The continuance of infection has been clearly traced to milk, but the source of re-infection of this food has hitherto been non-apparent. It may possibly be due to a case of "carrier" typhoid, and careful observations are now in hand with a view to confirm or disprove this supposition.

*Small-pox*.—During the past few years small-pox has adopted the annual habit of paying the city a tentative spring visit. The type has continued to be very mild, leading to difficulty in tracing out contacts, and to increased chance of missed cases; but, on the other hand, the infectivity of this mild type appears to be comparatively small, and, as a fact, each outbreak has been readily repressed.

This disease, absent since June, 1905, re-appeared in January, 1906, lasting up to June, this period affording a scattered product of twenty-seven cases.<sup>1</sup>

The interest of the outbreak centred in its introduction and, commencing, spread in a public elementary school, a quite unique experience in Bristol. Investigation showed that three out of four children in one class in the school were unvaccinated. The obvious remedy soon stopped the spread; but the strictness of the conditions for success is shown by the necessity of having, at one time during the outbreak no less than six hundred persons under observation. This was over by the end of March.

<sup>1</sup> *Annual Report of Medical Officer of Health*, pp. 30-33.

A second introduction, apparently unconnected with this one, lasted from March to May, owing to two "missed" cases, but calls for no special comment.

From May, 1906, until January, 1907, no fresh introduction occurred; in January, however, it re-appeared, and resulted in five cases, one fatal. This outbreak was blotted out by April, and no further introduction has taken place.

The summer session of Parliament was distinguished by the passing of some important Acts bearing on public health.

(1) *The Notification of Births Act, 1907.*—This is an adoptive Act, and its object is to secure notification of each birth within thirty-six hours to the medical officer of health, so that advice may be extended to the mother, where needed, as to the management and feeding of her infant. Adoption of the Act in any district is subject to the approval of the Local Government Board, who will require to be satisfied that the local authority will provide the necessary machinery, health visitors, &c., for utilising its provisions. Some opposition to the Act as it stands has been in some quarters expressed by the medical profession, who may be compelled to a violation of professional secrecy; and in place of its adoption—at Gateshead, for example—a voluntary notification by the medical attendant has been substituted.

(2) *The Education (Administrative Provisions) Act, 1907,* provides, *inter alia*, that the powers and duties of a local education authority shall include the duty to provide for the medical inspection of children, immediately before, or at the time of, or as soon as possible after their admission to a public elementary school, and on such other occasions as the Board of Education directs; and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools.

The effect of this Act will be to make universal that medical inspection of school children which has proved advantageous in the few districts of England where it has been attempted, and to bring England into line with the advance in the direction for some years made in America and upon the Continent.

The proviso that in any exercise of powers under this section the local education authority may encourage and assist the establishment or continuance of voluntary agencies, and associate with itself representatives of voluntary associations for the purpose, is evidence of the value attached by the department to the assistance which voluntary endeavour, when started in a friendly spirit, can afford to public bodies in their executive work ; assistance which is particularly helpful in matters relating to the care of the young, the assistance of mothers at and after child-birth, and the teaching of domestic hygiene.

*The Public Health Acts Amendment Act, 1907*, contains, in Parts III., IV. and V., forty-one sections, variously amending and supplementing previous Acts in regard to sanitary provisions, infectious diseases, and common lodging houses. The Act may be applied in part, or wholly, by an order of the Local Government Board to any sanitary district.

*The Public Health (Regulations as to Food) Act, 1907*.—This short act of three sections implies a good deal more than its length would suggest. It is entitled "An Act to enable regulations to be made for the prevention of danger arising to public health from the importation, preparation, storage, and distribution of articles of food." The regulations will be framed by the Local Government Board under the Public Health (Ports) Act, 1896, and will materially add to the executive duties and obligations of port sanitary authorities.

*The Cholera Regulations* of the Local Government Board, dated September 9th, 1907, reproduce the main provisions of previous Orders, with modifications and amendments in accordance with the decisions of the Paris Convention, and giving recognition to the recent developments of knowledge as to rat infection, plague, and mosquito infection in yellow fever. The Central Department is fully alive to the necessity for preparation in advance, especially in view of the possibility of renewed activity of cholera, and the port sanitary districts are to be maintained in a proper state of efficiency.

## Progress of the Medical Sciences.

### MEDICINE.

**Course of the fibres of taste.**—With regard to the vexed question as to the course of the taste-fibres, Morrision Davies, in a very valuable paper on the "Functions of the Trigeminal Nerve," based partly on experimental evidence, and partly on the material afforded by fifty cases in which the Gasserian ganglion had been removed,<sup>1</sup> brings forward the following evidence. The difference of opinion is chiefly as to the connection between the chorda tympani and the brain, whether taste impulses pass by the trigeminus or by the facial or glossopharyngeal route. The best evidence dealing with the relationship of the fibres of taste and the trigeminus is derived from the examination of patients after removal of the Gasserian ganglion. The following table gives the result in cases examined more than one month after the operation :—

| Name of examiner. | Total cases. | Taste<br>unaffected. | Taste<br>impaired. | Taste<br>lost. |
|-------------------|--------------|----------------------|--------------------|----------------|
| Krause .. ..      | 5            | 1                    | 2                  | 2              |
| Cushing .. ..     | 18           | 17                   | 1                  | —              |
| Davies .. ..      | 17           | 15                   | 1                  | 1              |
|                   | 40           | 33                   | 4                  | 3              |

Dr. Davies considers that in face of these figures it is impossible any longer to consider the trigeminus as the normal channel through which taste-fibres reach the brain. Explanations of the occasional disturbance, either temporary or permanent, of taste after removal of the Gasserian ganglion have been attributed to (1) injury to the superficial petrosal, which connects the geniculate ganglion with the glossopharyngeal, during the operation or by subsequent formation of scar tissue; (2) to injury to cells of geniculate ganglion (Dixon); or (3) to some interference with chordal (Krause) transmission, brought about by a mechanical or toxic disturbance due to degeneration of the N. lingualis (Cushing).

As to the course of the taste-fibres, the author concludes that clinically evidence has been brought forward which supports those who hold the view that the fibres pass by the pars intermedia, as well as to those who favour the path by the glossopharyngeal, but from morphological, developmental and histological observations, he inclines to the opinion that the gustatory

<sup>1</sup> *Brain*, 1907, xxx. 219.



impulses reaching the geniculate ganglion by the lingual and chorda tympani, pass thence to the brain in the pars intermedia.

\* \* \* \* \*

**Experimental atheroma.**—In view of the clinical work that has been done in recent years on estimation of the blood pressure, and of the importance of elucidating the causes of atheroma and arterio-sclerosis, the results of experiments made by Dr. G. R. Rickett are of importance.<sup>1</sup> The animals used were rabbits, since by way of the superficial veins of the ear an easy channel for daily intravenous injections is afforded. The drugs employed were adrenalin, squill, barium chloride, tobacco and nicotine.

The experiments show that adrenalin is not the only substance that can cause atheroma in rabbits, and that the cause of the disease, if a toxin, cannot be a toxin peculiar to this substance. The author holds that a mechanical factor, rise of blood pressure, is alone responsible, and that any procedure which raises the blood pressure, whether it be physical or the administration of drugs, provided that the pressure induced be sufficient, will cause atheroma. In applying these results to human pathology, it is to be remembered that these animals have only been experimented with for a few months. In three out of four animals treated with either tobacco or nicotine the author succeeded in producing atheroma; he assumes for the failures that the individuals had a high resistance to the effect of the drug, and remarks that other observers have found it difficult to produce the disease in young animals, and also that the more weakly an animal is the more readily are changes in its vessels produced. He succeeded in producing atheroma with both barium chloride and squill; with the latter, however, the changes are not so severe and extensive as with adrenalin, tobacco, nicotine and barium, but show the same microscopical features. Adrenalin is by far the most certain agent to produce these lesions; this would be expected, if we suppose that atheroma is originated by the damage done by periods of high blood pressure, for adrenalin is by far the most potent agent in this respect.

The author thinks there is no evidence to support the views that the patchy character of the disease is due to the effect of the drug on the vasa vasorum. Further, a mechanical theory affords a reason for the affection of the large trunks only, since it is only in the proximal portion of the vascular system that the pressure rises high enough to effect so great a destruction of elastic tissue. The occurrence of small plaques of atheroma at points of bifurcation, where ascending arteries rise from the artery, is due to the high blood pressure at this early point of the course of these arteries. No changes were found in the

<sup>1</sup> *J. Path. and Bacteriol.*, 1907, xii, 15.

pulmonary artery, because the pulmonary system has no vaso-motor nerves, and is but poorly provided with vessels.

Experiments with potassium cantharidate, chosen because it acts as an irritant but causes no rise in blood pressure, were negative, thus proving that a merely irritant effect cannot cause the disease in question. Without going into detail, it may be said that the earliest changes consist in stretching, frequent breaking and interruption of the elastic fibres, followed later by involvement of the muscle fibres in the degenerative process, and deposition of calcium salts. The nearest parallel in human pathology to the experimental disease is the calcification of the media in the peripheral vessels, and the most important conclusion to be drawn from these experiments is that high blood pressure certainly causes great damage to the arterial system.

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**Chloride deprivation in treatment of renal anasarca.**—Prof. Strauss<sup>1</sup> says that chloride deprivation is to be used, not as some have urged for the treatment of diseases of the kidney in general, but for the prevention and treatment of certain forms of renal dropsy; and further, that not every case of renal anasarca is necessarily an object for the systematic deprivation of chloride. It is in cases especially of acute and chronic parenchymatous nephritis that the question of chloride deprivation occurs, whilst the treatment of dropsy in contracted granular kidney falls into the same category as that of cardiac dropsy. In anasarca, due either to acute or chronic parenchymatous nephritis, this treatment is indicated. Cases of the latter in which elimination in general, and more especially that for sodium chloride, is deficient, can be recognised by two symptoms: (1) with an average intake in the food, the daily output, both per cent. and in total quantity in the urine, is extremely small; and (2) running parallel with this deficient excretion, a progressive increase in body-weight, indicating a retention of sodium chloride in the tissues, and with it of water. Without visible anasarca a considerable quantity of water can thus be held back in the tissues. In this condition, then, and in anasarca itself, deprivation of chloride should be a part of the treatment, and is obtained by (1) regulating the intake in the food, and (2) increasing its elimination from the body by giving preparations of caffeine, of which diuretin is the most effective, increasing both the total quantity of urine and also the percentage of chloride.

So also Minkowski, writing on the treatment of dropsy by regulating the intake of water and salt,<sup>2</sup> puts the reduction of sodium chloride intake in the first line in the treatment of renal dropsy. Limitation of fluid must be carried out with caution.

<sup>1</sup> *Folia Therap.*, 1907, i. 122.

<sup>2</sup> *Therap. d. Gegenw.*, 1907, n.f., ix. 1.

Excessive quantities of fluid are, however, certainly to be avoided, so that a diet of milk only—three litres of milk being taken daily—is a mistake, especially in the contracted kidney. One to one and a half litres of milk should be given combined with other articles of diet. It is well known that in renal dropsy, digitalis and the diuretics belonging to the group of purin bodies—caffein, diuretin, agurin, theocin—are often of great service. They bring about the elimination of a quantity of water and salt from the body without damaging the kidneys. The question cannot, however, be regarded as yet settled, for Drs. A. Bittorf and G. Jochmann, in an article on "Sodium Chloride Metabolism,"<sup>1</sup> state that the conditions present in renal disease are very variable. If cardiac failure is present, the conditions are the same as in uncompensated heart disease. The elimination of chloride is good, and to a great degree independent of the excretion of water. By increasing the amount of salt taken in acute nephritis with oedema there was brought about an increased output of sodium chloride and water, and afterwards the same patient, when without oedema and with good excretion of water, sometimes showed a delayed excretion of chloride. In chronic parenchymatous nephritis, there is very good, seldom delayed elimination of chloride with normal output of water. In chronic interstitial nephritis there is generally good chloride excretion.

J. MICHELL CLARKE.

## SURGERY.

**Excision of the breast for carcinoma** has been attended by better remote results since the adoption of wider removal of skin and lymphatics than was formerly the custom, but there is still much to be accomplished in combating this disease by operation. To those who have not familiarised themselves with modern methods, excision of the breast seems simple enough for anyone to undertake, but the results under these circumstances are deplorable. Several papers have recently been published dealing with this subject, and a consideration of them will show the practice of to-day and the results to be anticipated. At the Massachusetts General Hospital<sup>2</sup> there were 416 cases of primary operation for cancer of the breast during a period of ten years, and of these 376 were traced to a conclusive end-result at an average period of eight years after operation. Sixty-four cases were alive and well, and seven died without recurrence over three years after the operation. Counting in the operative mortality, there were 320 attempts at radical cure, 67 of which, or 20.9 per cent., were successful. Cases in which the tumour was ulcerated, or was adherent to the skin or chest wall, and cases in which the

<sup>1</sup> *Deutsches Arch. f. klin. Med.*, 1907, lxxxix. 485.

<sup>2</sup> *Surg., Gynec. and Obst.*, 1907, v. 39.

axillary glands were palpably enlarged, gave distinctly less promising results than when these conditions did not exist ; and no case with palpably enlarged cancerous glands above the clavicle, and no case of cancer of both breasts, was cured. It was found that extensive operations with wide removal of skin gave the greatest freedom from local recurrence, but removal of the pectoralis minor appeared to be of slight significance. Recurrence in the scar occurred in less than half the cases. Internal recurrence was most frequent in the lungs, mediastinum, in the axillary and supra-clavicular glands, the liver, and the spine. Nineteen per cent. of those passing the three-year limit without evidence of recurrence, showed recurrence later, and four cases developed recurrence six years or more after the operation. Fifteen cases died as an immediate result of the operation, giving a mortality of 3.6 per cent. on the whole period of ten years ; but the mortality was 5.1 per cent. in the first five years, and 2 per cent. in the last five years. The results which we have just summarised represent the work of twenty different surgeons, and may therefore be regarded as the probable outcome of any large number of cases. Greenough, Simmons and Barney,<sup>1</sup> who have collected these cases in the practice of the Massachusetts's Hospital, regard a "complete operation" as one including the removal of the whole breast and axillary contents, the removal of the pectoralis major muscle, and either division or removal of the pectoralis minor. They rightly consider that the amount of skin removed with the breast is a matter of great importance. They contrast the cases in which the wound was directly closed by suture with those in which so large a skin defect was made that a plastic operation was required to close the wound. In 67 out of 160 "complete operations" a plastic operation was performed. Of this number 13 were successful, 19.4 per cent. ; whereas in the 93 complete operations in which the wound was sutured directly there were only 11 successful cases, 11.7 per cent. The difference between these cases was even more marked when local recurrence was considered. Of the 67 cases with plastic operation, no local recurrence in the scar took place in 57.6 per cent., whereas of the complete operations in which the wound was sutured directly, only 44 per cent. remained free from local recurrence.

Having thus considered the results obtained at a general hospital, we may refer to some points in the methods and results of individual operators. Halsted<sup>2</sup> for the past two years has performed the "neck operation" (clearing out the lymphatics above the clavicle) in most cases. He omits it in hopeless cases, in most "duct cancers," and in some carcinomata of adenomatous type in which the axilla at operation is not macroscopically involved. Unless there are special contra-indications, he considers the neck operation should be performed (1) in all cases with

<sup>1</sup> *Loc. cit.*

<sup>2</sup> *Ann. Surg.*, 1907, lxvi. 1.

palpable, operable, neck involvement; (2) when the apex of the surgical axilla is involved. When mid-axillary involvement is demonstrable at the operation apical implication is almost certain, and hence (3) in these cases also the neck should be typically cleared of its lymphatics, as high, at the very least, as the bifurcation of the carotid. The influence of early operations and glandular involvements is shown by the fact that he claims a cure of 85 per cent. if the axilla and neck are negative, of 31 per cent. if the axilla is positive and the neck negative, but only of 10 per cent. if both axilla and neck are positive. In considering these statistics Halsted takes the three-year limit as evidence of cure; but Jacobson<sup>1</sup> considers that this limit is too short to determine the end-result. This observer follows Halsted's technique except as to the removal of the supra-clavicular glands, which is only undertaken when there has been apparent invasion of the neck.

Oliver<sup>2</sup> considers that the most potent factor bearing upon prognosis is the character of the growth. The richly cellular, rapidly growing, soft, succulent carcinomata are much less amenable to surgical treatment, even when seen early in the course of the disease, than are the more fibrous, slowly growing, hard varieties of the disease,

Cabot<sup>3</sup> draws attention to the danger of recurrence from the self-inoculation of the wound with cancer cells set free during operation. The possibility of this occurring is a reason for removing breast, muscles and axillary contents in one mass, and for keeping the dissection outside of the lymphatic distribution as far as possible. When a cancer has been cut into for purpose of diagnosis, the opening should be tightly closed before further operation is undertaken, and every precaution should be taken by changing instruments, &c., to avoid inoculation. Where the operation has gone close to the cancer, as through suspicious tissue, Cabot thinks that the application of tincture of iodine to the surface of the wound prevents a quick recurrence when such appears otherwise inevitable. This observer, in common with others, makes it a practice to give each patient a course of X-ray treatment immediately after the operation, with the idea of destroying any bits of cancer that may have escaped removal. For this the exposures to the X-rays are made twice a week for three or four months after operation.

One of the most enthusiastic supporters of clearing the supra-clavicular region as a routine measure is Pilcher,<sup>4</sup> who finds that in ten of the cases in which enlarged supra-clavicular nodes were discovered and removed, three remained free from recurrence. He considers that the point of suspicion is the triangle at the junction of the subclavian and internal jugular veins, where the nodes are found which guard the entrance to the

<sup>1</sup> *Ibid.*, p. 43.

<sup>2</sup> *Ibid.*, p. 51.

<sup>3</sup> *Ibid.*, p. 57.

<sup>4</sup> *Ibid.*, p. 67.

mediastinal lymphatic paths, and to which run not only the lymphatics, which pass up under the clavicle from the axilla, but also an inconstant but not infrequent set of ducts, which run up in the front of the thorax from the mammary region to the base of the neck, down into which they dip after running over the inner end of the clavicle. The denseness of the deep fascia at the base of the neck, together with the overlying tissue, make it difficult to detect infected nodes by palpation until they have attained some size; but when palpable or visible, the presumption is that the infection is of long standing and of considerable extent, and therefore justifies the gravest prognosis. Pilcher thinks that even then the infection may still be confined to the accessible supra-clavicular group, so that their extirpation may ensure a complete removal of all carcinoma-bearing tissue; but of more importance is the practical recognition of the probability of the presence of infection of the supra-clavicular nodes in every case of breast carcinoma of much duration or extent, and the incorporation into the general plan of operative attack, in all such cases, of an incision into the base of the neck and a systematic removal of all possibly infected tissue, even though there may be no distinct evidence to sight or touch before such incision of the presence of the infection.

From a careful study of fifty cases, Dennis<sup>1</sup> states that after an apparent cure for eighteen years after operation there may yet be a return of the disease in some other organ. In the cases in which no return has been observed, the operation was performed almost without exception within six months of the incipiency of the disease, thus showing the importance of early operation. He, however, points out the fact that in some cases in which the outlook is most unfavourable, as manifested by extensive ulceration, hemorrhage and wide-spread axillary involvement the final results have been entirely satisfactory.

Enough has been said to show that the operation for removal of the breast for carcinoma should not be entered upon without an intimate knowledge of modern principles; and one may call to mind the statement of Ransohoff<sup>2</sup> that "almost everyone who does surgery at all feels himself competent to do a breast operation, which to do properly, in my judgment, is one of the most difficult feats of surgery." From the extracts which we have quoted it can be seen that there is complete unanimity as regards the removal of a wide area of skin, the pectoralis major and the axillary lymphatics. The chief point of difference is as regards the desirability of removing the lymphatics above the clavicle as a routine measure. Some observers state that they always consider this necessary, but it must be remembered that this procedure increases the mortality of the operation. The wiser course perhaps is to be guided by the actual conditions

<sup>1</sup> *Surg., Gynec. and Obst.*, 1907, v. 57.

<sup>2</sup> *Ann. Surg.*, 1907, xlvi. 73.

found at the time of operation, and to remove the lymphatics above the clavicle if they are obviously affected, or if the axillary group of glands is affected so high up as to suggest the probability of the infection of the supra-clavicular lymphatics.

As Oliver<sup>1</sup> truly says, the operative treatment of cancer of the breast is far from an ideal method, even with the extensive removals practised at the present time; but the hope for the future lies in better prophylaxis, and in a better knowledge of the nature of the disease.

JAMES SWAIN.

### PSYCHIATRY.

**Bacterial origin of general paresis.**—Few investigations into the pathology of insanity have been followed with more interest than those of Ford Robertson and McRae<sup>2</sup>, dealing with a bacterial origin for general paralysis of the insane. These authors assert that a diphtheroid bacillus—perhaps an attenuated form of Klebs-Löffler bacillus, but more likely a distinct form—is the specific organism in general paresis and tabes. The invasion of this is specially predisposed to by syphilis, chronic alcoholic excess, and over-nitrogenous ingestion. Large numbers of a diphtheroid bacillus are said to have been found in the respiratory, alimentary and genito-urinary tracts of advancing cases of general paresis, the principal infecting sites being considered to be the buccal and naso-pharyngeal mucosæ. From these foci toxins are generated which occasion the facial tremors and paresis, and by perineural conduction some of the cortical lesions also. Stress is laid on the actual tissue-invasion by these organisms in general paresis as distinct from their finding on the surfaces of mucosæ, which may happen in other cases than general paresis or in sane individuals. The authors describe especially two forms of diphtheroid organism, one often a thread-like bacillus which they term *B. paralyticus longus*, commonly the only micro-organism found in the catarrhal pneumonic foci that occur, in most of the cases of general paresis dying during congestive seizures. A second form of diphtheroid bacillus, which resembles the *B. xerosis* in broth reaction, but differs morphologically in showing prominent metachromatic granules, is not thread-like, and is thinner and shorter than the other; this they call *B. paralyticus brevis*. Both forms are often virulent to mice and rats, but there is a variance in their relative toxicity. The *B. paralyticus brevis* has been detected in fresh blood in one case of general paresis, but is said to be taken up so rapidly by the polymorphonuclear leucocytes, that complete digestion occurs in two to three hours. This bacteriolytic power of the leucocytes in general paresis, the authors think, shows a higher index than in the normal individual, and it is owing to this, in

<sup>1</sup> *Loc. cit.*

<sup>2</sup> *J. Mant. Sc.*, 1907, liii. 590.

the greater number of cases, that it is not practicable by present methods to procure cultures during life. They, however, made pure growths of a diphtheroid bacillus from fresh blood in four cases and from cerebro-spinal fluid in two. Disintegrating bacilli were found in the blood, cerebro-spinal fluid, urine, vessel-walls and pia-arachnoid of general paresis in many cases. Their experiments on rats gave varying results according to the inoculation with the long or short form of the diphtheroid, and the isolation of these from dead or living tissues. Those rats which died with paralytic symptoms presented changes in their cerebral tissues in the form of periarteritis, neuroglia-proliferation and nerve-cell lesions. Robertson and McRae believe there are two varieties of general paresis similar and yet essentially distinct, occasioned by one or other of these bacilli, or perhaps by yet another form, or forms, of diphtheroid bacilli, gaining entrance to the lymph stream and blood. They lay stress on the benefit found in a case of tabetic crises, in whom injections were at first made of definite doses of a killed culture of the *B. paralyticus brevis* (isolated from the patient's urine), and subsequently of a bactericidal serum. The first injections were followed by the return of the crises, which seemed to be immediately dependent on them. The aim in these researches being a therapeutical one, experiments were commenced with an anti-bacterial serum, prepared by inoculating sheep with dead cultures of the *B. paralyticus longus*. The immunised serum was given either by hypodermic injection, by mouth, nose, or in one case per rectum. Previous inoculations with vaccines, prepared by suspension of the bacilli in sterile saline solution, gave encouraging results. Thirty-four cases of general paresis were treated with anti-sera, and in all what was considered a diagnostic reaction for general paresis and tabes obtained. This consisted in a rise of temperature to 100° F. or more (or 99° F. or more when given by mouth), occurring within twelve and over within twenty-four hours in the case of injections. Besides this there were flushings, vertigo, defect of vision, confusion, increased inco-ordination, &c. Control experiments were made in other forms of insanity, and in these no specific reaction was observed after mouth administration, and any rise of temperature after injection was explicable by other factors. (This qualification hardly appears satisfactory to us.) Leucocytic increase after the anti-sera was found in most cases of these controls, but there was no material change in the paretics. On the other hand, normal serum and polyvalent anti-streptococcal sera were injected into general paretics without reaction. The authors claim that most of their cases of general paresis treated with the sera undergo more or less improvement; thus, of 12 cases treated by themselves all improved; of 9 cases treated by others 6 improved, 3 did not. This leaves 13 cases unaccounted for.



George Robertson, of Stirling, has carried on investigations with the same objective, but with yet more elaborate precautions and technique. In thirteen general paretics he found present a constant diphtheroid organism in seven, and he obtained cultures from the blood in seven cases and from cerebro-spinal fluid in four cases.

Thus, not only were cultures more frequently obtained than by Ford Robertson and McRae, but the organism was studied in more than twenty cultural media. Moreover, the bacillus described by the latter authors had not been observed by him in any case, and the organism which he had found differed from it in many respects. It also had been found in other forms of insanity in acute cases. G. Robertson thinks it possible that a large group of diphtheroid bacilli may exist which produce substances toxic to the nervous system, and which, if not specific in producing general paresis, may be contributory.

Orr and Rows hold that infection in general paresis, bacterial or toxic, proceeds along the lymph paths rather than the blood stream. Candler, working at the Claybury laboratory, quotes various bacteriologists as showing that diphtheroid organisms, in the first place, are met with all over the body in cases free from insanity; further, that organisms similar to those described by Ford Robertson are met with in two localities, especially mentioned by this author, in a large number of sane persons; that diphtheroid organisms are, as a whole, met with in no greater frequency in general paretics than in other forms of insanity, and cannot be isolated more readily from the one than from the other.

Candler has examined the blood of twenty-four general paretics during life—on forty-one occasions in all, and in no single instance has he seen or obtained cultures of an undoubted diphtheroid bacillus. Also, in nine cases in which he has examined the cerebro-spinal fluid, he has neither seen diphtheroids nor obtained cultures. He comments on the dangers of contamination during culture making, the doubtful evidence of stained films and sections unless confirmed by cultures, and the errors caused by terminal and *post-mortem* invasions

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Lewis Bruce has found **hyperleucocytosis** in what he terms **bacterial toxic insanities**, and also, variably, in **general paresis**. This increase, together with certain temperature rises—regular, recurrent or irregular in type according to the stage of the disease—with disturbances of alimentary tract, certain serum agglutinations, with signs of a general toxic invasion and lowered leucocytic resistance, leads him to consider general paresis as a disease of bacterial origin. He has found, in three or four cases, serum taken from general paretics in a stage of remission to arrest the

progress of early paretics. One patient he immunised to the Ford Robertson diphtheroid, and completely stayed the course of the disease; death occurred ere long from phthisis. Bruce recognises, however, that severe attacks of erysipelas, carbuncle, &c., may also indefinitely cause an arrest.

It will be seen that so far there is not much unanimity amongst different observers as to the existence or determination of the bacterial organism in general paresis. Nevertheless, undoubted progress is being made in an investigation of immense difficulty, and the results of Ford Robertson's serum treatment cannot but be viewed with hopeful bias. That such advance has been made since 1894, when an article by Goodall and Bullen reviewed the then meagre literature, and to some extent forecast the present attitude towards general paresis, is productive of a reasonable expectation that the further researches of Robertson and others may end in a solution of a most involved question.

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Pomeroy<sup>1</sup> has contributed very interesting and important evidence as to the value of **lumbar puncture in the diagnosis of syphilis, general paralysis** and some other conditions. The presence or absence of leucocytic and albumin increase, separate or conjoined, in the cerebro-spinal fluid appears to give much help, under known conditions, in the determination of these diseases. The number of experiments collected and personally made by Pomeroy are sufficiently harmonious in result to make his conclusions of considerable weight. Leucocytic increase seems almost the rule in secondary syphilis; in the tertiary form not so surely, unless the nervous system be involved. The amount of increase is, however, seldom so great in syphilis as in general paresis, nor is the albumin content, even if at all present, in the former nearly so abundant as in the latter. The estimation of albumin is considered a most important matter in deciding on the presence of general paresis, and is in many cases the only feature that will differentiate it from syphilis. Albumin increase is, however, not so constant as hyperleucocytosis, nor is it always parallel with it. The whole clinical picture of a doubtful case must, of course, be carefully studied; but in such, where the poise of opinion is between brain syphilis and general paresis, a relatively small cell increase and low albumin content may justify decision for the former. On the other hand, a negative finding of leucocytic and albumin increase is of more value in deciding against syphilis and general paresis than a positive one is for them.

Hyperleucocytosis in general paresis has been observed in nearly all of 500 cases, lumbar punctures giving negative results of only 2.6 per cent., after due allowances have been made. Pomeroy himself in thirty clear cases of general paresis found

<sup>1</sup> *J. Nerv. & Ment. Dis.*, 1907, xxxiv. 312.

positive increase in cell and albumin in every case. (In about half of these he believes syphilis to have been present.) His opinion is that these conjoined positives constitute one of the earliest and most constant signs of general paresis, even appearing before amnesic, eye or ataxic symptoms.

Farrar regards the hyperleucocytosis as the outcome of a subacute or chronic cerebro-spinal periarteritis or pia-arachnitis. Further experiments have been made to ascertain the value of this cell and albumin content in the differentiation of chronic alcoholic psychoses and other central organic brain troubles. Nissl collected and examined thirty cases of presumed chronic alcoholic psychoses; in twenty-three of these the finding was negative; the others proved to be either actual or probable paretics or old syphilitics. Other observers have recorded similar results. The finding in epilepsies is usually negative, except where there is a syphilitic basis; the same is said of brain tumour, arterio-sclerotic insanity, Korsakoff's disease, central hemorrhages, dementia precox, and paranoid excitement. In short, a constant absence of hyperleucocytosis practically negatives brain syphilis and para-syphilitic conditions. On the other hand, the differentiation of brain syphilis and general paresis will have to rest on the relative amount of hyperleucocytosis and albumin association.

Pomeroy insists on the necessity of several punctures before decision be made. The dangers of the operation appear minimal if not more than 3 to 5 c.c. of fluid are withdrawn; it is, however, counterindicated in cerebellar tumour. The patient should not be punctured unless put to bed; in this case mild headache, nausea or vomiting seem the only sequelæ.

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**Change in type of general paresis.**—Clark and Attwood<sup>1</sup> have collected 3,000 records of general paresis, to investigate the question of a change in its type. They assert that the oft-stated opinion that there is a relative increase of the simple demented and melancholic type to the grandiose in late years is mainly due to the inclusion of cases of dementia, depression, and cerebral syphilis, formerly wrongly classified, but now correctly grouped under general paresis. These authors consider euphoria still to be the characteristic psychological symptom, and to be found in 70 per cent. of the cases, although less extravagant and grotesque. Allowing for the more rigid delimitation of pseudo-general paretics, the writer of this periscope has seen no reason to alter the conclusions expressed by him in 1893 on this variation in type—at any rate, so far as England is concerned. He still asserts that mania is relatively less frequent, less pure and less sthenic; that primary dementia is more common; convulsive

<sup>1</sup> *J. Nerv. & Ment. Dis.*, 1907, xxxv. 553.

and paretic seizures less frequent, less violent and fatal. The variations are much influenced by locality, and the strenuous life and fresh population of the American cities quite accounts for a maintenance of the former characteristic type there. It is likely, on the other hand, that any gradual process of degeneration taking place in a nation is reflected in the type of its insane as well as its sane population.

F. ST. JOHN BULLEN.

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## Reviews of Books.

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**Aids to Medical Diagnosis.** By ARTHUR WHITING, M.D. Pp. ix., 152. London: Baillière, Tindall & Cox. 1907.

This little book is intended for those who already possess a knowledge of systematic medicine. The plan adopted has been to start with the prominent symptoms in any given case, and then to separate the members of each group as clinical entities. The book therefore is essentially clinical in its aim, and the writer has succeeded in compressing a large amount of useful information into a small compass.

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**Aneurysm of the Abdominal Aorta.** By F. P. NUNNELEY, M.D., M.A. Pp. vii., 121. London: Baillière, Tindall & Cox. 1906.

The author has published this monograph, originally written as a dissertation for the M.D., partly at any rate at Professor Osler's suggestion. It consists of a careful analysis of thirty-two cases, the clinical and pathological notes of which were found in the records of St. George's Hospital; and though little is unearthed that has not been taught before, yet the book is of much value in several ways. It is in the first place a check on the statistical articles already published by Browne, Bryant and others. Again, several interesting ætiological data are brought into prominence, notably the rarity of the condition in women and the comparatively early age at which its victims are affected (between 25 and 45 in 75 per cent.). Only thirteen of the cases were correctly diagnosed during life, and some of Nunneley's observations on diagnosis are therefore of peculiar interest; in particular there is his remark that radiography is only of value in confirming a positive diagnosis. Perhaps the most important section is that dealing with treatment. It is naturally pessimistic in tone, perhaps unduly so in the paragraph dealing with

potassium iodide. Lancereaux's gelatin treatment is also described as unsatisfactory. The results of surgical treatment, bad as they have been hitherto, yet leave room for hope as to the future. Apart from its intrinsic worth, this monograph is an eloquent testimony to the value of honestly-kept records, whether clinical or pathological; and its author is to be congratulated from all points of view upon this solid addition to our knowledge of an interesting and important subject.

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**Manual of Anatomy.** By A. M. BUCHANAN, M.A., M.D. Vol. II.

Pp. xv., 575—1539. London: Baillière, Tindall & Cox. 1907.

It is impossible to review in any detail a book of over 1,500 closely printed pages in the space at our disposal. This volume deals with the abdomen, head and neck, and thorax, and is published in the same style and in series with Rose and Carless's *Surgery*. It forms a much less cumbersome book than any of the single-volume anatomies, and is printed clearly and illustrated well. The regional method of description is adopted, which, together with some directions for dissection, makes the book a manual for the dissecting-room as well as a systematic treatise. There can be no doubt that the whole work being by the same hand is an advantage far greater than any obtained by the system of multiple authors in such a subject as anatomy. The letterpress and descriptions are extremely clear and accurate; but it is to be regretted that not only are the well-known personal names, such as Scarpa's or Cotle's fascia, retained, but many others which are new to English students are introduced, such as Houston's muscle for the anterior part of the bulbo-cavernosus, and the muscle of Guthrie for the constrictor urethræ. This involves an unnecessary effort of memory in a subject which already taxes that faculty to the utmost.

The manner in which the embryology and histology of each organ are described after the gross anatomy is completed is a most excellent plan, and one which almost compels the student's attention, whereas separate chapters of these subjects are apt to be overlooked or forgotten. The illustrations of the abdomen, thorax, and nervous system are very clear, and just fulfil the purpose for which they are intended. But many of the pictures of the head and neck are far too small and complicated, and would necessitate a reference to larger text-books or atlases. Taken as a whole, the book is a fresh and clear exposition of an intricate subject, and it will probably be welcomed for its conciseness and become as popular among students as the other members of the same series of manuals.

**Inflammation.** By J. GEORGE ADAMI, M.A., M.D., F.R.C.S

London: Macmillan &amp; Co. 1907.

It was a happy thought which led Professor Adami to issue this reprint from his article on "Inflammation" in Allbutt's *System of Medicine*. Admirable as the original contribution was, the issue gains by the inclusion of the more recent work on the subject. Would that the book could find its way to the desk of every writer upon medical matters, and form a part of the outfit of all who carry out the practical applications of medicine and surgery!

"It cannot be too strongly emphasised," says Adami, "that a knowledge of the inflammatory process is the foundation of all pathology; and if our pathology is not to be a mere catalogue of names of morbid states, but an endeavour to bring into order and relationship the phenomena of disease, then the study of the inflammatory process is the natural starting-point for a right understanding of pathology and what it can teach us.

"It is deplorable that many surgeons enunciate a pathology at variance with that of the physicians; it is a matter for regret that general pathology and bacteriology are so rarely associated in one worker; but it must be acknowledged that no one man can hope to be equally familiar with the recent advances in neuropathology, hæmatology, immunity, infection, &c."

Hence the status of this book is at once defined. It marshals the facts already known; it states the deductions permissible, and points the way to further work; it tends to unify the terminology and the conception of inflammation; and as such, it should have the careful study of every student of medicine and surgery.

We are not going too far when we point out that in no other book is the subject so concisely and clearly set forth, and when we indicate that our lack of knowledge of its contents must stamp us as too little caring for the health of our patients; for Adami has not contented himself with the enunciation of principles, but has troubled to apply these to therapeutical details.

**The Bacteriological Examination of Water Supplies.** By WM.

G. SAVAGE, M.D., D.P.H. Pp. xvi., 297. London: H. K. Lewis. 1906.

The objects of this class of book are two: first, to provide the reader with an up-to-date compilation of methods and of the facts the application of those methods have elicited; and secondly, to present the views of the author and of other observers upon the deductions which may properly be drawn from the results obtained in dealing with new material. In the present instance, as may be anticipated from Dr. Savage's wide experience of bacteriological methods, the first object is very completely

attained, and the practical worker will be very grateful for the collection, in so small a compass, of all really useful existing processes for the detection and enumeration of those micro-organisms, the presence of which in potable water is a more or less conclusive indication of pollution. This portion of the book would be improved by avoidance of a good deal of repetition, which renders reference difficult, and by a more systematic display of the essential characteristics of allied species.

With the discussion, however, of the precise significance of the presence or absence of certain forms, matter of much more controversial type is introduced.

The author's attitude on this question is not a doubtful one; in parliamentary parlance he is a "whole hogger," as witness the claim that "it—*i.e.* bacteriological examination—is taking its rightful place as the most valuable of all available methods by which to judge the purity of a water supply," and the declaration that "the *B. coli* estimation is the essential enumeration upon which to judge the purity of waters." Do the facts justify quite so emphatic a statement?

Whilst characterising as baseless the opinion that *B. coli* is ubiquitous, the writer adduces proof that it is present in the excreta of practically all vertebrates, and concludes that "obviously, with such an extensive natural habitat, this organism must needs be extensively distributed." Evidence of this is afforded by the demonstration of *B. coli* "in as little as 2 c.c. of upland surface waters, even from sources of undoubted purity, and away from all human or sewage pollution," and again by Dr. Houston in the water of remote Highland lochs, in which instances its presence is explained by the intervention in the one case of sheep, and in the other of trout and other "lower animals;" an explanation that would seem to suggest that the detection of *B. coli* must be accompanied by an inspection of the locality before any definite conclusion can be arrived at.

It appears to be part of the case of the advocates of one kind of water examination to depreciate all other methods, and Dr. Savage does not fail to make a determined attack on chemical processes, adducing the Bridgend epidemic as a case in point. But the bearing which the source of the water has upon the selection of the appropriate method of analysis is hardly sufficiently recognised. It is, no doubt, perfectly true that a much smaller admixture of sewage with water can be recognised by bacterial than by chemical analysis, but it does not follow that the former must invariably be the best guide to the recognition of "impurity and hazard" under the conditions of natural water supplies.

When the sewage is directly introduced into and uniformly mixed with the water, and conveyed to the consumer along a capacious channel, whether superficial or subterranean, bacterial

examination is, beyond doubt, the most useful aid to topographical inspection; but when the polluted water undergoes more or less perfect purification by subsoil filtration, the arrest of the micro-organisms is very capricious and uncertain, depending on the subsoil conditions of the moment, and these do not affect the presence of the perfectly characteristic soluble matters on which the chemical analysis depends. In such cases bacteriological enumeration may, and often does, afford no glimpse of the warning of danger which chemical analysis discloses with certainty.

On the whole, it may be said that Dr. Savage offers no good reason for abandoning the very generally accepted and safe position that all available means should be used simultaneously in forming an opinion on so vital a matter as the safety of a water supply, but furnishes one of the best and most useful guides to the intelligent handling of the undoubtedly important instrument so ably advocated in the work under review.

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**Elements of Physics for Medical Students.** By FREDERIC J. M. PAGE, B.Sc., F.I.C. Pp. xvi., 288. London: Cassell and Company, Limited. 1907.

The author describes this volume as a text-book which, in conjunction with the *Manual of Chemistry* by Luff and Page, recently noticed in our columns, serves to cover all the chemistry and physics—both theoretical and practical—required by the Conjoint Board and the Society of Apothecaries. In reality it is a well-illustrated syllabus, and excellently adapted to the needs of the teacher, and just sufficient to refresh the mind of the apt and well-taught student. Without simultaneous expansion, by precept and practical demonstration, it would be unintelligible to the beginner in the science of physics. Of this no doubt the author is well aware, but the claim to be a text-book is scarcely justified. On reading the book, one is impressed with the nakedness of our school education of the present day, which sends boys into the study of medicine ignorant of the simple principles of physics which this syllabus includes, and makes it necessary to spare some of the all too short five years' curriculum in teaching such rudiments of knowledge (we forbear to designate it as a special branch of learning) as can readily be grasped by any boy of thirteen not deficient.

It is incredible that a youth can register as a student of medicine ignorant of the facts contained in this superficial survey, which after all includes nothing but a few of those generalisations based on observation which pass under the name of laws, e.g. Boyle's Law, Avogadro's, Gay Lussac's, Ohm's, and the like. Still, we must take our author's word for it, this kindergarten standard is the one required by our chief examining



boards. From this point of view, it must be admitted that most of the statements in the book are accurate, for to have misquoted the "laws of reflection" would be scarcely possible, and the whole work is little more than a series of such quotations. In many places brevity has proved the handmaiden of obscurity, above all in the chapter where it was least excusable, that on "Light." The explanation of the *dioptr* is an example of a sentence so compressed as to defy unravelling; one must merely begin afresh and make a new statement in order to be intelligible to the unlearned.

There is also a poor little sentence crying in the wilderness, saying, "Concave lenses would be—2 D, etc." Disowned by the context on either side, it is difficult to fill up the hiatus of that "&c." Myopia is undoubtedly described misleadingly, being attributed entirely to defects of the lens when no theory of causation need have been introduced.

Acoustics merely left us wondering—thirteen and a half pages wasted! Here even the supposition that the volume might prove useful as a syllabus in the hands of the teacher failed; but we began to appreciate why the art of auscultation and percussion is so mysterious to the average student, and that to try to build up a superstructure of knowledge on a foundation is a task foredoomed to failure.

As a mere outline of Mr. Page's course of instruction we say no ill of it, but as a student's hand-book it is not worthy of consideration.

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### **The British Pharmaceutical Codex : An Imperial Dispensatory.**

Pp. x., 1,422. London: The Pharmaceutical Society. 1907.

The second title of this work has been placed first as it most aptly sums up its function.

The word Imperial may well be used, for the *Codex* includes monographs not only on the drugs now official in the B.P., but also those used in our colonies and dependencies the world over. Thus while, of course, Calumba and Chirata will be found in alphabetical order, so also appear *Coscinium* and *Andrographis* for the benefit of the practitioner in India and the Malay Archipelago. The book is issued by the authority of the Pharmaceutical Society of Great Britain, and is the work, during the last three years, of a committee including the leading pharmacists of Great Britain, while Dr. W. E. Dixon, the Professor of Pharmacology at King's College, Oxford, has arranged the concise notes on the Physiological Action and on Prescribing.

The book is intended to meet three great wants not met by the British, Pharmacopœia.

First of all it includes a large number of drugs and preparations which, while in every-day use, have not yet been considered worthy of a place in the B.P. A national pharmacopœia is almost necessarily conservative; this dispensatory is liberal to a degree in its admission of new—relatively new—drugs and preparations. Examples of new drugs included are cacodylic, formic and glycerophosphoric acids, salts of these acids, and preparations made from them. In this category adrenaline and three liquors prepared from it will certainly attract notice, in view of the widespread use of preparations of the adrenal glands, and the difficulty of knowing what is the best preparation to use. *Emulsio chloroformi* will appeal to the medico who does his own dispensing, by economising his use of alcohol for making spirit of chloroform. *Emulsio magnesiæ*, which will be better known by its synonym of *lac magnesiæ*, is wanted every day as an antacid, and also as a mouth wash. The old concentrated infusions—strength 1-7—we find here, and will quite obviate the use of the rather clumsy concentrated liquors of the B.P. *Solutio saponis æthereæ* will enable the member of a hospital staff to obtain the same ether soap for his bag that he uses at the hospital.

The second innovation made by the *Codex* is that of introducing absolutely new classes of preparations, characteristic of elegant pharmacy, and also of general medical and surgical interest. *Balnea*, gelatin capsules, *carbasus* (gauze) plain and medicated, will enable the surgeon to order, and the pharmacist to supply, articles of known and standard quality; lints, elixirs which will obviate the resort to American dispensatories for elegance of compounding; gargles, *gelatines*, *guttæ*, *insufflationes*, *linctus*, *misturæ*, *nebulæ*, *parogens*, *tabellæ*, *tablettæ*, will, it is safe to prophesy, go far towards rendering uniform the hospital pharmacopœias of the future, in which it will be possible to include *mist. gentian acid*, B.P.C., the due inclusion of the last three letters indicating the source of the formula.

The third function which this work is destined to achieve may in many respects, and possibly from the standpoint of the prescriber in all respects, be the most important. Up to the present every post encumbers the prescriber's table, and later his waste-paper basket, with more or less plausibly-worded advertisements of "new drugs," mostly chemicals of the organic type. In this flood of patented nostrums it is almost impossible to separate good from bad, and even when conviction of the value of a drug or its preparation is reached, one is confronted with the necessity of prescribing a patent article more or less "secret" in its nature. Add to this that many drugs of this nature—practically identical in composition—appear under a number of different patent names, and the unsatisfactory position of the prescriber is emphasised. For example, hexamethylenetetramine may be

prescribed as aminoform, ammonio-formaldehyde, ammonaldehyde, cystamine, cystogen, formin, metramine, urisol, uritone, urotropine, and vesalvine (one of these names at least being of Bristol origin). In cases such as this the compilers have coined a name for the drug—formamine in this case—indicated its formula and characteristics, and inserted at the end of the monograph a list of patent names under which it is known. Further examples are acetannin, tannigen, methyl ditannin, tannoform, sodii anilarsenas, atoxyl, &c., &c. The gain to prescribers in ordering such drugs under their *Codex* names will be threefold: first, they will be prescribing a drug of whose nature and composition they are aware, they will discourage the introduction and use of quack nostrums and secret remedies, and they will in many cases place remedies within the reach of patients who could not afford to pay the fancy prices at which many fancy patent drugs are sold.

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**The Prevention of Senility and a Sanitary Outlook.** By Sir JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S. Pp. 141. London: Macmillan and Co. Limited. 1905.

This little book contains two addresses, one delivered before the Preventive Medicine Section of the London Congress of the Royal Institute of Public Health, the other at a Conference of the Sanitary Inspectors' Association. Both are pleasant reading, and are written in the light, picturesque style characteristic of the author. Without venturing to analyse the factors which together make the charm of this style, one can at once indicate two, namely the gift of humour and the judicious use of good metaphors. As an example of the latter, notice one on page 27. In speaking of the wear and tear of certain occupations, he instances a Sheffield penknife maker, who delivers 28,000 accurate strokes with his hammer daily, each stroke requiring a discharge from the nerve cells of the arm centre. "Little wonder," he says, "that these cells, firing 28,000 rounds a day, should sometimes be overheated and kick, or should generally suffer erosion."

As might be expected, Sir Crichton-Browne has no specific for the prevention or postponement of old age. He does not believe in Metchnikoff's views of the rôle of phagocytes and the bacterial flora of the large intestine in delaying or hastening senility; neither does he think Dr. Allchin's prophecies are sound. "Dr. Allchin," he writes, "has brought forth the *elixir vitæ* from limbo, and tricked her out in the fashionable scientific costume of the hour." Hustling, overeating, insufficient exercise, and luxurious living generally he considers the main enemies of long life.

The second of these lectures, on "The Sanitary Outlook,"

consists of carefully-studied statistics, criticisms on Dr. Maudsley's and Dr. William Hall's views on consumption and the feeding of children, a comparison of the death-rate in urban and rural districts, &c., and the general conclusion that the growth of healthy suburbs by improved means of travelling, and the encouragement of pleasant home life, are the most likely means of improving the future sanitary condition of England.

**Studies in the Bacteriology and Etiology of Oriental Plague.**

By E. KLEIN, M.D., F.R.S. Pp. xv., 301. London: Macmillan and Co. 1906.—Those who were privileged to hear Dr. Klein's address to the Bristol Medico-Chirurgical Society on "Plague," in 1901, will gladly renew acquaintance with the subject in this volume, in which the whole subject of the etiology and intimate nature of plague is critically discussed. The bacteriology of the disease is first dealt with, including a description of the microbes which simulate in one or another respect the *B. Pestis*, and the methods and tests relied upon for discrimination. The important epidemiological relationships of plague in the rat to plague in man receive adequate notice; and it is to be noted that the author concludes that "there is a distinct failure of evidence that transmission of the disease is effected by fleas or lice from an infected animal to a healthy one." On this very important point Dr. Klein's opinion is not in accord with the results obtained in the remarkable and complete experiments recorded in the "Reports on Plague Investigations in India," issued by the Advisory Committee appointed by the Secretary of State for India, the Royal Society, and the Lister Institute, and printed in the September number of the *Journal of Hygiene*, 1906, which deserves the careful attention of all students of the subject.

**Tumours, Innocent and Malignant.** By J. BLAND SUTTON,

F.R.C.S., Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital, &c. Fourth Edition. London: Cassell and Co. 1907.—This useful handbook still continues its successful career. Appealing alike to the surgeon and practitioner, it contains a large number of illustrations, which more or less convey the idea of the structures described. A considerable portion of the book is devoted to dental problems. The section on chorion-epithelioma has been brought up to date. It is evident that much of the text has been rewritten. Perhaps in the next edition it will be possible to harmonise the terminology of the surgeon with that of the academic pathologist.

**Opuscula selecta Neerlandicorum de arte Medica.** Pp. xii., 325.

Amsterdam: F. van Rossen. 1907.—This volume, published by a committee to commemorate the Jubilee of the "Nederlandsch Tijdschrift voor Geneeskunde," contains reprints of four classical discourses, by Erasmus, by Boerhaave, by Gaubius, and

the researches of Van Leeuwenhoek and Swammerdam. That of Desiderius Erasmus, dated Louvain, 13th March, 1518, is in praise of the art of Medicine. It is written in Latin, but an English translation faces each page. Leeuwenhoek's essay is in the form of a letter to the Royal Society of London, giving his views on the circulation of the blood, in 1688, clearly setting forth that the arteries and veins are continued blood-vessels. The other essays, written in Dutch, have French or German translations.

**Auscultation and Percussion.** By SAMUEL GEE, M.D. Fifth Edition. Pp. xviii., 325. London: Smith, Elder & Co. 1906.—The fifth edition of this classical work needs no further recommendation than to refer to the popularity which the previous editions have acquired. In the preface the author makes mention of skiagraphy in physical examination of the chest, and gives his reasons for not including the subject in this latest edition of his book, while at the same time he acknowledges the great value of the method. The alterations and additions to the text are very few, for indeed there was but little for Dr. Gee to modify or add to in the earlier editions of a work which will always remain to us as a model of literary style, combined with scientific accuracy and historical erudition. "Sunt clari hodieque et qui olim nominabuntur."

**First Lines in Midwifery.** By G. ERNEST HERMAN, M.B. Pp. xii., 222. New Edition. London: Cassell & Co., Limited. 1907.—The difficulty in a small book which deals with a large subject is to get the proper balance in what is necessarily an abstract. This is most successfully accomplished in this case, and, considering its small size, a remarkable résumé has been compiled. The illustrations are very numerous, and carefully chosen, and the text is written in a clear and simple style that is easy to follow. It would be well, to recommend a doll as well as a skull for learning mechanisms with, especially to beginners. One wonders also why no mention is made of gentle massage of the breasts in helping to empty them for "caking" or "painful fulness," as it is such a useful adjunct. The book has been well known and appreciated for many years, and has already been reprinted and revised many times. The addition of a chapter on the requirements of the Central Midwives Board is a distinct advantage.

**Anæsthetics and their Administration.** By FREDERIC W. HEWITT, M.V.O., M.A., M.D. Third Edition. Pp. xxxiii., 627. London: Macmillan & Co., Limited. 1907.—The third edition of Dr. Hewitt's well-known work on *Anæsthetics and their Administration*, comes at a very opportune moment, seeing how much work has recently been done on the subject; and, as might be expected, this volume contains much new matter, dealing with such questions as ethyl chloride, surgical shock, acid intoxication, and the exact dosage of chloroform, and the author's views on

these points are as welcome as they are fair and clear. We regret, however, to note the omission of an account of local and of spinal analgesia. In the chapter devoted to the "Physiology of Anæsthesia," special reference is made to the interesting researches of Hamilton Wright on the inimical effects of ether and chloroform upon the nerve cells of the brain and spinal cord; and a note has been made of the work of Kemp, Maunsell, and S. and H. Pringle, which shows that prolonged ether administration tends to seriously affect the organism. Under "Physiology of Chloroform Anæsthesia" has been added a concise description of the exact percentage apparatus of Waller, Dubois, and Collingwood; also a résumé of the researches by Embley and others, showing the depressing effect of lowered blood pressure upon the function of respiration; and the author points out that, according to Snow, primary cardiac paralysis from chloroform poisoning only occurs with high percentages of the drug, and that in the absence of such concentration the heart only fails secondarily to respiratory depression. The whole of Part II., dealing with the preparation of the patient, the selection of the anæsthetic, and the method and circumstances of administration has been very carefully rewritten, and much practical matter has been added. On page 375 the author discusses the Vernon Harcourt apparatus. On the whole, the volume combines the completeness of a reference book with the conciseness of a student's manual, and the fairness and impartiality of a standard work. And the preface should not be overlooked, as it is in itself an able appeal and an eloquent effusion.

**Anæsthetics, their Uses and Administration.** By DUDLEY WILMOT BUXTON, M.D., B.S. Fourth Edition. Pp. viii., 415. London: H. K. Lewis. 1907.—In re-editing his manual on anæsthetics, Dr. Dudley Buxton has succeeded in introducing much that is new without in any way interfering with the compactness and clearness which characterised the previous editions. Not only is the dosimetric method of administering chloroform described, but ethyl chloride is dealt with in full, and room has been found for a good account of local and spinal analgesia. As regards the fatalities under ethyl chloride, the author says that it is probable that this drug "is less safe than nitrous oxide, and must be placed between ether and chloroform in normal patients, but before ether when lung and kidney complications exist." On summing up the arguments in favour of spinal analgesia, Dr. Buxton says "those who have employed this method fail to show that it is safer than chloroform, or more free from unpleasant sequelæ," and he quotes Hare's opinion "that it is only applicable to cases for which general anæsthesia is an impossibility." Under local analgesia reference is made to the faintness and respiratory difficulty which are produced by excessive doses of adrenalin

chloride, and for injection a solution of  $\text{I}$  in 200,000 is recommended. The present edition is very welcome, and will doubtless be even more popular than its predecessors.

**Guide to Anæsthetics.** By THOMAS D. LUKE, M.B. Third Edition. Pp. xvi., 136. Edinburgh: William Green & Sons.—This excellent little book has in four years reached its third edition, which fact in itself bears testimony as to its merits. As the present edition appears within two years of the previous one it has naturally been found unnecessary to make many changes in the text. We are of opinion that the section dealing with local anæsthesia should be more fully written up. There is every reason to think that Dr. Luke will soon be called on for the fourth edition.

**Golden Rules of Medical Evidence.** By STANLEY B. ATKINSON, M.A., M.B. Pp. 63. Bristol: John Wright & Co.—This little book is by one who combines in himself the qualifications of doctor and barrister. The subject lends itself well to summary in this way, and the book is really valuable. The hints are most excellent and practical, and should save many a mistake. It is just the thing to refer to when concerned in a medico-legal case, as it does not take ten minutes to look right through the book. A few of the aphorisms may be quoted as specimens: "Pregnancy must not be asserted until quickening has been felt, or the foetal parts are palpable." "The body of the coroner's officer is always available for ocular demonstrations to the jury of the sites of injuries." "An early 'I don't know' is better than a late 'I did not know.'" "If you attend a court after being subpoenaed, the fee is due even should no evidence be called."

**Pulmonary Consumption.** By ARTHUR LATHAM, M.D. Pp. vii., 259. London: Baillière, Tindall & Cox. 1907.—A third edition of this work on the diagnosis and modern treatment of pulmonary consumption, with special reference to the early recognition and the permanent arrest of the disease calls for little comment. New sections have been inserted on such subjects as the value of the opsonic index in diagnosis and treatment, the use of Koch's new tuberculin in treatment, and Dr. Paterson's interesting observations on the value of manual labour at Frimley Sanatorium. The book is one which should be studied by all who are interested in questions relating to the sanatorium treatment of phthisis.

**Catalogue of the Pathological Museum of the Manchester University.** By J. LORRAIN SMITH, M.A., M.D. Manchester: Sherratt and Hughes, at the University Press.—To the Museum curator this catalogue must prove of good service. It is arranged upon the decimal system of classification, which provides the means of describing the anatomical and pathological appearances by means of decimals. In addition, however, the specimens are fully described. As this catalogue represents the contents of the

Manchester Pathological Museum, it must be conceded that the Northern University has an excellent collection of specimens illustrating morbid lesions. We thoroughly recommend the perusal of the catalogue to those who are arranging museums or undertaking original research. It is almost unnecessary to add that Lorrain Smith's part in the work represents the high standard of excellence which we are accustomed to expect from him.

**Aids to the Treatment of Diseases of Children.** By JOHN McCaw, M.D., R.U.I., L.R.C.P. Edin. Third Edition. Pp. xiii., 383. London: Baillière, Tindall & Cox. 1907.—We are never quite sure whether we like least small books on big subjects, or big books on small subjects. The present volume may perhaps be included in the former class, as, although the title limits its scope to "Treatment," this cannot be considered to any advantage apart from diagnosis, symptomatology, pathology, &c.; in fact, on turning over the pages we find the ordinary arrangement is adopted, and each disease is considered under the above headings, treatment occupying no more than its usual share of the available space. Moreover, sufficient care has not been taken to exclude conditions which are dealt with in the ordinary text-books on medicine, and are not peculiar to or even common in childhood. Thus hydatid of the liver, cerebral tumour, Raynaud's disease, and amyloid disease are described in a manner too short to be of much value to the student. With the main part of the book, except for its brevity, we have little fault to find; there is a very succinct account of the principles of infant feeding and the digestive disturbances of young children, a section on the specific fevers, which does not differ much from that in most text-books of medicine, and a short account of circulatory and respiratory diseases. A propos of the latter, we are surprised to note that the author recommends aspiration in the treatment of empyema as a first resort. Other sections on blood, general and nervous diseases complete the book. There are, we suppose, some types of mind who are really "aided" by little books like this, and for them this one is sufficiently reliable. Judgment and experience, the essentials in the treatment of children's diseases, cannot be acquired from any book, but may certainly be materially assisted by some of the larger monographs on the subject. The book is well got up and printed, and has an adequate index.

**St. Bartholomew's Hospital Reports.** Vol. XLII London: Smith, Elder & Co. 1907.—There are many valuable and interesting papers in this volume of the reports. We may refer to a few which have specially interested us, but there are many others of equal importance, and amongst these we may mention a very exhaustive one by Dr. Finlay Alexander on "Hypertrophic Pulmonary Osteo-Arthropathy," with several good skiagraphic plates. Altogether readers of this volume, whether their interests



are medical or surgical, will find much to interest them. Dr. Herbert Williamson records two cases of large, partly solid and partly cystic, embryomata, one occurring in a girl of 16, and the other in a young man of 23, which on microscopic examination showed various elements of complex tissue, such as bone, cartilage, nervous tissue, and tissue resembling intestinal mucous membrane, as well as tissue quite like that of ordinary sarcoma and carcinoma. He refers to other cases of these "embryomata" published during recent years, and describes their character and symptoms, and relation to other forms of growth. His communication is one of considerable value. Mr. Elmslie contributes a paper on "Late Rickets: or the Continuation of Early Rickets to an unusually late age." He regards the changes in the epiphyses at the wrist as the essential condition in rickets, and refuses to recognise a case of genu valgum, even with marked bony deformity, occurring over ten years of age, as late rickets at all. We fail to see why we should thus limit the term "late rickets" to cases with epiphyseal enlargement only. Of what nature, we should be inclined to ask, does he consider the disease which manifests itself as marked deformity in the bones of the limbs in young persons from ten to twenty years of age? He gives us in his paper a table of cases of late rickets accompanied by epiphyseal enlargement. Mr. Faulder, who has been studying bronchoscopy at the clinic of Prof. Killian, of Freiburg, writes an interesting account of its use and the indications for it. The great difficulty he admits is to get the needful experience. He says, "Evidently the best way is to practise on a living subject, if such be found." We hardly think such could or should be found for the manipulative practise of the method which involves passing the instrument through the larynx into the trachæ. Its value in practised hands seems to be great in detecting foreign bodies in the bronchus, and he tells us of a case in which a stricture of the bronchus was seen and dilated with its aid.

**Diseases of Women.** By GEORGE ERNEST HERMAN, M.B. Third Edition. Pp xvi., 900. London: Cassell & Company Limited. 1907.—The present edition of this well-known work has been thoroughly revised and brought up to date. The plan of the book is substantially the same as in previous editions. Chapters II.—V. are devoted to a consideration of the principal symptoms of which gynæcological patients complain; and although this arrangement has its drawbacks, it is one which should prove very useful to students and practitioners. With regard to the treatment of uterine displacements, the author considers ventrofixation the most satisfactory operation for prolapse, and that of vaginal fixation for retroflexion. For intractable cases of chronic salpingo-oophoritis, removal of the uterus and appendages through the vagina is recommended; we think, however, that in most cases the abdominal operation would be the easier and safer.

The chapters on malignant disease of the uterus have been enlarged, and a fuller description of its pathology added. There is also a good account of chorio-epithelioma. For cases of fibromyoma of the uterus requiring operation the author recommends abdominal hysterectomy; myomectomy he considers has a very limited field of usefulness, and oophorectomy is obsolete. In Chapter I. a good account of the pathology of vascular caruncle is given. Throughout the book special attention is devoted to the clinical aspects of diseases of women, and the details of treatment and operative measures are fully described. The illustrations throughout are numerous and well executed, and the letterpress is excellent.

**Annual Report of the Board of Regents of the Smithsonian Institution for the year ending June 30th, 1905.** Washington: Government Printing Office. 1906.—This is not such a bulky volume as usual, but the papers which it contains are of the same absorbing interest that we are accustomed to. The papers dealing with medical subjects are a paper read before the Indian section of the Society of Arts in May, 1905, by Dr. Creighton on "Plague in India," in which he points out that plague especially affects villages where the inhabitants live in dwellings the walls of which are made with mud, and that there can be no real cure for the devastations of the disease without a more civilised kind of dwelling; and one on the "Fight against Yellow Fever," by A. Dastre, showing the success that has been obtained in stamping out yellow fever by waging war against the special mosquito which is the cause of the disease. Another medical paper is "Progress in Radiography," by L. Gastine, written in 1905. Since this date still further progress has been made in this science, and it is interesting, on looking over a paper written only two years since, to see how X-ray methods continue to be improved. A very curious paper to read at the present day is a "History of Photography," which consists of extracts from a *Manual of Photography* by Robert Hunt, published in 1854, and is devoted to giving an account of Sir John Herschell's researches into the effect of light on substances other than silver salts—such as the cyanides—and his efforts to get a workable photographic process from the same. Papers on the "Genesis of the Diamond," "Gold in Science and in Industry," and "Liberia" may be picked out as well worth reading; but perhaps the paper of all others which appealed to us was the paper read before the Royal Geographical Society in February, 1905, by Sir Frank Younghusband on the "Geographical Results of the Tibet Mission." The enthusiastic way he describes the scenery passed through, the way the members of the expedition bore their privations, and the successful accomplishment of the expedition, makes one of the most refreshing bits of reading that we have come across for a long time.

## Editorial Notes.

### **Bristol Royal Infirmary.**

A SPECIAL meeting of the Governors of this institution was held in the board-room on December 5th, to consider changes in the rule 36, when, as the outcome of the recent controversy and in accordance with the agreement arrived at previously between the Committee and the Faculty, the following rule was put to the meeting and carried:—

“No member of the Honorary Staff shall hold any Union or Club appointment. No member of the full Staff, or of the Assistant Staff, shall hold any other General Hospital appointment or more than one special Hospital appointment, but this rule shall not preclude members of the Honorary Staff accepting purely consulting and not active appointments at another hospital. That the full Physicians shall limit their practice to medical work. That the full Surgeons shall limit their practice to surgical work. That each of the Specialists shall limit his practice to his speciality,”

thereby annulling the rule proposed and carried at the last Board meeting, and to which the Medical Faculty could not give its consent.

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### **Food-fads and Faddists.**

DR. W. HALE WHITE, in his address in Medicine, delivered at the Annual Meeting of the British Medical Association at Exeter, pleading for accuracy of thought in medicine, and speaking on the habit of using the term irregular gout as a cloak for pathological ignorance, remarked that “the symptoms of irregular gout were commonly ascribed to an excess of uric acid or bodies allied to it in the blood. Some do this without knowing the amount of uric acid present in the blood

of a healthy person, without drawing any distinctions between endogenous and exogenous uric acid, without any attempt to estimate the uric acid in the patient's blood, without any experimental evidence that the injection of uric acid into the blood produces the symptoms in question, and without any thought of the fact that in some forms of leukæmia there is an excess of uric acid in the blood without the symptoms supposed to indicate suppressed gout. This doctrine has become so widespread, that even the public tell us that their symptoms are caused by an excess of acid. Having assumed, not proved, that the symptoms the patient has are due to irregular gout, and having assumed, not proved, that this is due to an excess of uric acid, the next assumption made is that certain foods cause an excess of uric acid; some say carbohydrates, some say fats, some say proteids, and it would be quite easy for a patient to consult three doctors in turn, and if he followed all, his diet would be water and nothing else. He who believes proteids harmful is the most artistic, for he has an eye to colour, and may, as a concession, allow white meat although he prohibits red. Where on earth is the justification for this? Are there any experiments showing that steak leads to more uric acid in the blood than chicken? Have a hundred cases of so-called irregular gout been published and contrasted with another hundred similar in their treatment, except that in one series red meat was replaced by an equal amount of white? Surely you will agree with me that all this is not a credit to us as members of a scientific profession. The simple fact that although gout has become much less common the consumption of meat has enormously increased, ought alone to make those who forbid proteids pause. The imagination of some has carried them still further. The fact that both gout and chronic osteo-arthritis are long-lasting diseases of joints has led them to think that as sufferers from one should be dieted, so those afflicted with the other; hence we find patients who have chronic osteo-arthritis forbidden various articles of food, sometimes, for example, sugar. Looked at calmly this is extraordinary, for there is not an atom of evidence that any particular article of food influences chronic osteo-arthritis. Have we in some of

our statements about the harmfulness of particular foods advanced beyond Ibu Haukal, who in about A.D. 950, describing the inhabitants of Palermo, said, "Their evil habit of eating raw onions in excess ; for there is not a person among them, high or low, who does not eat them in his house daily, both in the morning and evening. This is what has ruined their intelligence, and affected their brains, and degraded their senses, and distracted their faculties, and crushed their spirits, and spoiled their complexions, and so altogether changed their temperament that everything, or almost everything, appears to them quite different from what it is." I strongly suspect that in those days onions were a cause of irregular gout.

The literary output on the subject of foods and food-fads has of late been enormous. The older views of Banting, the more modern ones of Fletching, the grape-nuts of Bernard Shaw, the apples of Haddow, the various vegetable fancies of Eustace Miles, the cheese diet of Dr. Haig, the use of Bulgarian sour milk, and that of a crowd of patent foods and drinks of various kinds, lead to the natural conclusion that a diet grounded on common sense is, perhaps, after all the best. Some are afraid of meat because of its toxins, and of broths because of their purin and waste products ; others fear that a vegetable diet may end in gastric dilatation, and that salads may harbour uncooked microzoa and bacteria ; milk and butter must be dangerous inasmuch as they harbour the germs of tubercle ; even bread may charge the blood with acids, whilst water may contain the germs of typhoid, and alcohol is a concentrated poison : hence it may be assumed that the only reasonable course is to eat, as appetite prompts, those viands which have been found by the experience of centuries to be harmless, and that neither the use of meat, soup, wine, condiments, fruits, vegetables, or coffee will be likely to shorten our days, although the abuse of some of them may.

It has been pointed out by Pawlow that we cannot live on chemical formulæ or on calories, and Chittenden maintains that the dietetic customs and habits of mankind are not much to the point, inasmuch as instinct and craving are not wise guides. What

has been called the "cabbage inspired" writings of the vegetarians are still less to the point, but direct physiological experiment should be the only scientific guide to an "ideal diet." Chittenden pleads that over-feeding is the predominant dietetic sin; his newer experiments on dogs on the effects of a low proteid dietary confirm his former views that the commonly accepted "normal" and "standard" diets contain an excessive amount of proteid, and he has shown by observations on men of the Army Hospital Corps, and more recently again on university athletes, that the body weight and nitrogen equilibrium can be maintained on an amount of proteid food far below the usual dietary standards.<sup>1</sup>

Far more important than the regulation of the quality of the food appears to be the important questions relating to the quantity of the same. These are discussed at considerable length by Van Noorden<sup>2</sup> in chapters on under-feeding and over-feeding. The general conclusion appears to be that it is impossible to draw up fixed, rigid rules for the individual; the personal equation is the all-important question, hence there is much excuse for the numerous vagaries in diet now in vogue, and much scope still remains to the manufacturing chemist for the unlimited increase of eccentricities in food and drink.

The importance of the personal element in dietetics is well illustrated by Dr. Leonard G. Guthrie.<sup>3</sup> He writes as follows:—

"The diet suitable for neurotic children is indeed always a matter of perplexity—no fixed rules for all are possible. Some abhor milk in any form, and would live on meat and pickles only; to others, meat and fat in almost any shape are abominable; some can only relish bread and butter, sweets and jam; some can hardly be induced to touch fresh vegetables or fruit, others would live on nothing else; some regard with suspicion the slightest variation and innovation in their diet, others will not eat the same food twice." He further adds that

<sup>1</sup> *The Nutrition of Man*. Chittenden. Heinemann, 1907.

<sup>2</sup> *Metabolism*. Translated by Walker Hall. Heinemann, 1907.

<sup>3</sup> *Functional Nervous Disorders in Childhood*. Oxford University Press, 1907, p. 25.

“our tastes and distastes with regard to food are generally formed in early life, and what we do not like is almost certain to disagree with us.” We all realise how difficult the problems of diet in sickness become when the patient has abhorred milk in early life, and will have none of it afterwards.

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**Winsley  
Sanatorium.**

THE second annual report of this Institution has been before us for some months. The medical profession generally is fully alive to the value of the work done in an Institution which has now shown itself to be a necessity, and to be an indispensable auxiliary to the National Association for the Prevention of Consumption. We think, however, that the public has not yet fully realised what good work is being done for the three Counties of Gloucester, Somerset and Wilts, and the City and County of Bristol. The Sanatorium is saving and prolonging many valuable lives, and is doing a great educational work. It is not, however, sufficiently known that whilst its finances remain in the unsatisfactory state which still continues it has been arranged by the Board of Governors that “In case any maintained bed shall not have been actually allocated to a local authority, public body, firm, group of persons, or private donor, who shall have agreed to maintain the same, the committee of management shall be at liberty to admit patients to such bed at the following charges: To persons resident within the Counties of Somerset, Gloucester and Wilts, and the City and County of Bristol, £1 15s. per week; to persons not so resident, £2 10s. per week.” During the past year many paying patients have been admitted under this rule, and it is of great assistance to the funds to have these beds fully occupied. Medical men are asked to remember that there is commonly no difficulty in securing admission to any patient on this basis.

We are glad to take this opportunity to welcome the arrival of the newly-appointed medical officer, Dr. A. Lewthwaite, who comes from Dr. Otto Walther's Sanatorium in the Badischer Schwarzwald.

**An Imperial  
Dispensatory.**

WE wish to direct especial attention to a review of the *British Pharmaceutical Codex* for the use of medical practitioners and pharmacists which will be found on page 358.

This *Codex* has been published by the authority of the Council of the Pharmaceutical Society of Great Britain, and although it has not quite the authority of the *British Pharmacopœia* it is likely to be a far more useful work. Every medical man should possess it, and it should be a constant companion both to prescriber and dispenser. We are indebted to Mr. A. L. Taylor, of the Bristol Royal Infirmary, for the excellent summary of a book which must make a great difference in the work of the pharmaceutical dispenser throughout the world.

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**“Codex” Review.** A STRIKING, if unintentional, testimony to the value of the new *Codex* is provided by a little red pamphlet, received apparently by all the members of the medical profession in Bristol, and presumably other places, entitled “A Curious Codex.” The noble and disinterested zeal with which the author expresses his righteous indignation at the omission of the mention of “Gingament” will surely be recognised by all prescribers of “Oids.”

Two salient facts stand out in happy contrast to the mass of puerility and diluted sarcasm provided by the writer. One, already dealt with in the review of the *Codex* in this number, the need for some distinguishing mark of the B.P. article as compared with B.P.C. The other—the writer’s own statement, born doubtless of inward conviction—that his pamphlet is too long.

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THE RIGHT HON. LEWIS FRY again presided at the annual distribution of prizes to the students of the medical department of the **University College, Bristol, Faculty of Medicine.** College at the commencement of the medical session in October, when Professor Francis Gotch, M.A., D.Sc., F.R.S., gave a highly stimulating



address on the question of University extension, and asked the question: "When will Bristol do what Liverpool has done, and attain its educational manhood." Prof. Gotch, as a Bristolian, is anxious for the reputation of the city. It was his hope and his firm belief that he might very shortly have the great pleasure of rejoicing with his fellow-Bristolians over the realisation of the long-expected University scheme, for when once started on a wide basis, it would astonish them by its vitality and free growth, and would become the pride of those who established and supported it.

Another noteworthy address given recently is that of Prof. Francis Francis on "The Nitrogen of the Atmosphere," particularly in relation to food supply.

The annual dinner was presided over by an old and distinguished student of the College, Mr. J. H. Parsons, F.R.C.S., who was supported by Prof. Francis Gotch as the guest of the evening. Prof. Walker Hall, in responding to the toast of the Bristol Medical School, remarked that this Faculty is a source of strength to the city and county, that it is an important factor in the everyday life of the community, and that it is doing good work, which will at one time or another benefit the individual citizen.

Prof. Gotch's missionary effort on behalf of the University scheme should do much to stimulate the local influences which are working steadily in that direction.

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## Notes on Preparations for the Sick.

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**Kuhn's Suction Mask.**—ROBORAT COMPANY, 8 Harp Lane, London, E.C.—For the congestive treatment of pulmonary tuberculosis and asthma, in accordance with Prof. Bier's system of artificial hyperæmia. The mask is made of celluloid, the mouth and nose portions being separate chambers. When applied to the face by means of the elastic band (which should be fastened round the neck under the ears), both nose and mouth are completely shut in. The air tube should be always well inflated, a tight constriction being placed around the small rubber tube after blowing up. A trial may then be made with the sliding valve in the nose portion completely closed, when respiration will be found

to be so much impeded as to become impossible. As a general rule, breathing should take place only through the nose, though in case of impediment arising from cold or other cause, air may be made to enter the mouth by opening the sliding valve in the cross partition. Expiration occurs unhindered through the circular valve provided for the purpose in both portions of the apparatus, and, with practice, can be made to take place quite freely through the mouth even with the valve aperture somewhat diminished. The aim of the use of the mask is, by providing a resistance to the intake of air into the lungs, to bring about an increased negative pressure in the thorax and thereby suction of blood into the lungs. The greater the resistance, therefore, and the longer it is continued, the greater becomes the amount of blood flowing into the lungs. It should not, however, be so great or so long continued as to bring on unpleasant by-effects, such as headache or other discomfort. It is quite possible that during the first few days of use there may be some ringing in the ears, in which case it is recommended that the mouth be closed, the nose held, and the cheeks inflated, when it will be found that air drawn out of the middle ear while wearing the mask is replaced through the Eustachian tubes. Another simple remedy is to make a few purposeful swallowing movements. This symptom is not of frequent occurrence, and in any case disappears after a few days. Inspiration against resistance by means of this method should be an active agent in the treatment of anæmic or tuberculous subjects. An increase in the number of red blood corpuscles is brought about, and an increased hyperæmia should have a beneficial influence upon the upper parts of the lungs which are most prone to tuberculosis. Good results have been obtained by Prof. von Leyden at the Berlin Charité.

**Formidine : Methylene Disalicylic Acid Iodide.**—PARKE, DAVIS & Co., London.—Formidine is an internal and external antiseptic and a substitute for iodoform. It is a true chemical compound, a condensation product of iodine, formic aldehyde, and salicylic acid, having the formula  $C_{12}H_{10}O_6I_2$ . It may be called an iodised derivative of salicylic acid and formic aldehyde, exhibiting none of the physical characteristics nor responding to any of the chemical tests for its constituent bodies until decomposed. Formidine is a reddish-yellow powder, tasteless, and having a slight but not disagreeable odour suggestive of iodine; it contains about 47 per cent. of this element. It is perfectly stable in the dry state. When heated, iodine is liberated, the substance melts, then chars, and is finally consumed without leaving any ash. It is insoluble in water, dilute acids, alcohol, and most other ordinary solvents, and does not decompose with glycerin. When brought into contact with alkaline organic secretions it slowly dissolves and develops the characteristics of its constituents, iodine,

salicylic acid, and formic aldehyde. It is supplied in five grain capsules for internal administration, and in this form it appears to be one of the best of intestinal antiseptics.

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**Egmol.**—PARKE, DAVIS & Co., London.—This preparation contains 40 per cent. of finest olive oil emulsified with fresh eggs and flavoured with best French brandy. It is a nutritious and stimulating food, which may be prescribed with excellent effect in wasting diseases. For those patients who cannot tolerate cod liver oil, egmol forms an excellent substitute; indeed, experiments carried out by Cunningham (vide *Journal of Physiology*, xxiii. 209) seem to show that owing to more perfect assimilation, olive oil may be ranked above cod liver oil as a flesh former and heat producer. Egmol is a perfect and stable emulsion, and in every way an excellent example of good pharmacy.

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**Petroleum Emulsion.**—PARKE, DAVIS & Co., London.—In spite of its slight utility, there has arisen a demand for an emulsion of petroleum. Much of the liquid paraffin of commerce is undesirable for medicinal use, but in the P. D. & Co. petroleum emulsion a pure fluid hydrocarbon is used, which is wholly free from acid traces and from the sulphur compounds often present in imperfectly refined liquid paraffin, and with it are associated suitable amounts of the hypophosphites of calcium and sodium.

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**Adrenalin and Chloretone Ointment.**—PARKE, DAVIS & Co., London.—This addition to the various modes of applying adrenalin contains one part of that drug with fifty parts of chloretone in each 1,000 parts, and by thus combining the constringent, analgesic and antiseptic powers of its constituents forms a most effective remedy in all indolent inflammations, in hemorrhoids, pruritus ani, pruritus vulvæ, eczema, chronic congestions of the nose and ear, &c. In ophthalmic work it is useful in simple or purulent catarrhal inflammations. It is supplied in collapsible tubes with elongated tips, which facilitate nasal or rectal medication.

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**Cholelith Pill (Pilula Cholelithica).**—PARKE, DAVIS & Co., London.—This chocolate-coated pill is a combination of oleate and silicylate of sodium with phenolphthalein and menthol. It is a new combination of drugs, which appears to have marked power to increase the amount of hepatic secretion, and to promote a due proportion of biliary acid salts wherewith to dissolve gall concretions, or at least so to diminish their size that they may be expelled naturally.

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**Black Wash Tablets.**—PARKE, DAVIS & Co., London.—The provision of the chemical constituents of lotio hydrarg. nig. B.P.

in accurate proportions needing only to be treated as directed on the label, will be found a great convenience, particularly by medical officers to expeditions, to whom lime water may be a troublesome, if not unattainable, item.

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**“Tabloid” Capsule Calcium Iodo-Ricinoleate, gr. 3 (0.194 gm.).**—BURROUGHS, WELLCOME & Co., London.—Calcium iodo-ricinoleate is a new salt containing a large proportion of iodine, which combines the therapeutic value of calcium and of the iodides. It is tasteless and odourless, and is not affected by the gastric juice. It produces no digestive disturbance, and is well tolerated by patients who cannot take potassium or sodium iodide.

Calcium iodo-ricinoleate possesses in a marked degree the valuable action of its components, and in syphilitic cases the results obtained compare favourably with those of treatment by the iodides. It has proved very successful in condylomata and other specific manifestations, whilst in stubborn cases of ulcers—including rodent ulcer, which resisted other treatment—it has been reported to produce a healthy granulating surface. Various affections of lymphatic glands and of the thyroid have been favourably influenced by the administration.

One to three may be swallowed with water three or four times daily after food.

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**“Phytin” Preparations.**—SOCIETY OF CHEMICAL INDUSTRY, Basle. London Agency, Harp Lane, E.C.—“Phytin” is stated to be the organic phosphorus-reserve material of green plants, and has been extracted from numerous seeds such as peas, haricot beans, and sunflower seeds.

It is a white powder, almost tasteless, and not very soluble in water.

Examination showed it to contain organically-combined phosphorus in large quantity.

It is supplied in capsules in the liquid form, and in combination with quinine.

For children it is prepared in combination with sugar of milk under the name of “Fortessan.”

No doubt the various “Phytin” preparations will prove valuable adjuncts to the older phosphorus-containing organic compounds used in medicinal dietetics.

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**Theinhardt’s Food for Infants.**—THEINHARDT’S FOOD COMPANY, London, E.C.—This food has gained considerable popularity during recent years, and is no doubt one of the best on the market.

The makers claim it to be “The Ideal Food for Infants.”

this being partly based on a table giving the analyses of various proprietary foods.

We may point out that chemical analysis is not by any means the chief criterion of "food value," and many of the foods which are compared with "Theinhardt's" have proved themselves to be of great value in the diet of infants and invalids. We consider that any preparation should be judged on its own merits, and not on the doubtful demerits of others.

The analyses of various foods, compiled from Hutchison's and König's works on the subject, give very interesting results, but the table is too lengthy to reproduce. It shows that the Infantina food (Theinhardt's Soluble Infants' Food) contains a very high percentage of nitrogenous and fatty matters, and that the Hygiama is even richer in nutritive matter of the highest value.

We are informed that these foods are in constant use at the Milk Depots of Berlin and Charlottenburg. The Infantina is intended for infants from birth up to two years of age, and the Hygiama is for older children and adults.

They are excellent foods, worthy of all commendation. The Hygiama differs from the other food in that it is flavoured with cocoa, and may be taken either in solid form, or as a substitute for tea or coffee: when so used it forms a very palatable and nutritious beverage.

**"Manhu" Diabetic Foods.**—MANHU FOOD COMPANY, Liverpool.—Under the above name several preparations are introduced for the use of diabetic subjects.

The firm claim that they have "changed" the starch without eliminating it, thus rendering it perfectly safe for diabetic patients.

This statement admits of criticism, for it is doubtful whether a physical or chemical change is referred to.

On several occasions we have chemically and microscopically examined several "Manhu" preparations, and found abundant evidence of the presence of starch, which gives the usual re-actions characteristic of this substance. Under these circumstances it is hard to understand the great superiority claimed for such preparations, as physicians can only condemn "diabetic" foods which actually contain starch grains in abundance.

We are of opinion that such foods as this for the diabetic are very misleading and dangerous. They are given to patients to whom starchy foods are forbidden, and the result is sometimes disastrous.

**"Miol."**—MIOL MANUFACTURING COMPANY, 66 Southwark Bridge Road, London, S.E.—Within the last few years numerous

compounds, with malt extract as the chief ingredient, have been manufactured.

"Miol" appears to be one of the latest of these, a distinctive feature being that it contains, among other ingredients, the finest olive oil.

It is recommended as a valuable food in consumption and other diseases where cod liver oil is usually prescribed.

"Miol" is not unpleasant to take, the taste of the olive oil being partially covered by the malt; but we think it somewhat doubtful whether olive oil approaches cod liver oil for the cases in which the latter can be absorbed and assimilated.

"Miol" may prove of service in those cases where preparations of cod liver oil cannot be administered or digested.

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### The Library of the Bristol Medico-Chirurgical Society.

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*The following donations have been received since the publication  
of the List in September:*

|   |                             |
|---|-----------------------------|
|   | <i>November 30th, 1907.</i> |
| The Chicago Pathological Society (1)        | .. .. I volume.             |
| L. M. Griffiths (2) .. .. .                 | .. .. 7 volumes.            |
| Dr. A. B. Judson (3) .. .. .                | .. .. I volume.             |
| The Middlesex Hospital (4) .. .. .          | .. .. I ..                  |
| The Surgeon-General, United States Army (5) | .. .. I ..                  |

### SIXTY-SIXTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors and show by whom the volumes are presented. The books to which no such figures are attached have either been bought from the Library Fund, or received through the *Journal*.

|  |      |
|--|------|
| Allbutt and H. D. Rolleston, T. C. [Eds.] <i>A System of Medicine</i><br>Vol. III.                                       | 1907 |
| Berdoe, M. .. .. <i>Essay on the Pudendagra</i> .. .. (2)  | 1771 |
| Bigg, G. S. .. .. <i>Cancer</i> .. .. .  | 1907 |
| Bourcart et F. Cautru, M. <i>Le Ventre. Pars II...</i> .. .. .   | 1908 |
| <i>British Pharmaceutical Codex, The</i> .. .. .   | 1907 |
| Bunge, G. v. .. .. <i>Text-Book of Organic Chemistry.</i> (Tr. by<br>R. H. A. Plummer) .. .. .                           | 1907 |
| Campbell, H. .. .. <i>Aids to Pathology</i> .. .. .  | 1908 |
| <i>Catalogue (Index) of the Library of the Surgeon-General's Office,<br/>United States Army. 2nd Ser., Vol. XII. (5)</i> | 1907 |
| Cautru, M. Bourcart et F. <i>Le Ventre. Pars II...</i> .. .. .   | 1908 |
| [Coell] .. .. . <i>The Stud Farm</i> .. .. (2) New Ed.   | 1876 |
| Collier, R. Hutchison and H. S. [Eds.] <i>An Index of Treatment</i>  | 1907 |

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|---|---|--------|
| <b>Corner and H. J. Pinches, E. M.</b>    | <i>The Operations of General Practice</i> .. .. .                                 | 1907   |
| <b>Crowe, H. W.</b>                       | <i>Consumption: Home Treatment and Rules for Living</i> .. .. . [2nd Ed.]         | 1907   |
| <b>Cunningham, D. J.</b>                  | <i>Manual of Practical Anatomy.</i> 2 vols. 4th Ed.                               | 1907   |
| <b>Dampier-Bennett, A. G.</b>             | <i>Physical Methods in the Treatment of Heart Disease</i> .. .. .                 | 1907   |
| <b>Dore, M. Morris and S. E.</b>          | <i>Light and X-ray Treatment of Skin Diseases</i> .. .. .                         | 1907   |
|   | <i>Encyclopedia and Dictionary of Medicine and Surgery.</i> Green's Vols. V., VI. | [1907] |
| <b>Esmarch, F.</b>                        | <i>First Aid to the Injured.</i> (Tr. by H.R.H. Princess Christian) .. .. 7th Ed. | 1907   |
| <b>Fernie, W. T.</b>                      | <i>Precious Stones (Curative)</i> .. .. .   | 1907   |
| <b>Goodall, G. H. Savage and E.</b>       | <i>Insanity and Allied Neuroses</i> New [3rd] Ed.                                 | 1907   |
| <b>Harman, N. B.</b>                      | <i>Preventable Blindness</i> .. .. .  | 1907   |
| <b>Hart, A. H.</b>                        | <i>Some Successful Prescriptions</i> .. .. .                                      | 1907   |
| <b>Hughes, E. L.</b>                      | <i>Squint and Ocular Paralysis</i> .. .. .  | 1907   |
| <b>Hutchison and H. S. Collier, R.</b>    | [Eds.] <i>An Index of Treatment</i> .. .. .                                       | 1907   |
| <b>Jones, R.</b>                          | <i>Mental and Sick Nursing</i> .. .. .  | 1907   |
| <b>Judson, A. B.</b>                      | <i>Growth and Deformity</i> .. .. . (3)   | 1905   |
| <b>Kenwood, L. C. Parkes and H. R.</b>    | <i>Hygiene and Public Health</i> 3rd Ed.  | 1907   |
| <b>M'Vall, J. C.</b>                      | <i>The Prevention of Infectious Diseases</i> ..                                   | 1907   |
| <b>Manson, Sir P.</b>                     | <i>Tropical Diseases</i> .. .. . 4th Ed.  | 1907   |
| <b>Micholitsch, E. Werthelm and T.</b>    | <i>The Technique of Vagino-Peritoneal Operations.</i> (Tr. by C. Lockyer)         | 1907   |
| <b>Morris and S. E. Dore, M.</b>          | <i>Light and X-ray Treatment of Skin Diseases</i> .. .. .                         | 1907   |
| <b>Muir and J. Ritchie, R.</b>            | <i>Manual of Bacteriology</i> .. .. 4th Ed.                                       | 1907   |
| <b>Nelson, J.</b>                         | <i>The Government of Children</i> (2) 2nd Ed.                                     | 1756   |
| <b>Newman, D.</b>                         | <i>Movable Kidney</i> .. .. .   | 1907   |
| <b>Nichols, J. B.</b>                     | <i>Diet in Typhoid Fever</i> .. .. .  | 1907   |
| <b>Noorden, C. von</b>                    | <i>Metabolism and Practical Medicine.</i> (Ed. by I. W. Hall) Vol. III. .. .. .   | 1907   |
| <b>Parkes and H. R. Kenwood, L. C.</b>    | <i>Hygiene and Public Health</i> 3rd Ed.  | 1907   |
| <b>Parsons, J. H.</b>                     | <i>Diseases of the Eye</i> .. .. .  | 1907   |
| <b>Partridge, W.</b>                      | <i>The Bacteriological Examination of Disinfectants</i> .. .. .                   | 1907   |
| <b>Paton, D. N.</b>                       | <i>Essentials of Human Physiology</i> 3rd Ed.                                     | 1907   |
| <b>Pinches, E. M. Corner and H. I.</b>    | <i>The Operations of General Practice</i>   | 1907   |
| <b>Ritchie, R. Muir and J.</b>            | <i>Manual of Bacteriology</i> .. .. 4th Ed.                                       | 1907   |
| <b>Robson, A. W. M.</b>                   | <i>Cancer of the Stomach</i> .. .. .  | 1907   |
| <b>Rolleston, T. C. Allbutt and H. D.</b> | [Eds.] <i>A System of Medicine</i> Vol. III.                                      | 1907   |
| <b>Russell, Hon. R.</b>                   | <i>The Reduction of Cancer</i> .. .. .  | 1907   |
| <b>Sajous, C. E. de M.</b>                | <i>The Internal Secretions.</i> Vol. II. .. ..                                    | 1907   |

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|--|--|---------|------|
| <b>Saundby, R.</b> .. .. .             | <i>Medical Ethics</i> .. .. .  | 2nd Ed. | 1907 |
| <b>Savage and E. Goodall, G. H.</b>    | <i>Insanity and Allied Neuroses</i><br>New [3rd] Ed.                           |         | 1907 |
| <b>Schrötter, L. von</b> ..            | <i>Hygiene of the Lung.</i> (Tr. by H. W. Armitt)                              |         | 1907 |
| <b>Stephenson, S.</b> ..               | <i>Ophthalmia Neonatorum</i> .. .. .   |         | 1907 |
| <b>Taylor, S.</b> .. .. .              | <i>On Acute Pneumonia</i> .. .. .  |         | 1907 |
| <b>Treves, Sir F.</b> ..               | <i>Surgical Applied Anatomy</i> (Revised by<br>A. Keith) .. .. .               | 5th Ed. | 1907 |
| <b>Turner, W. A.</b> ..                | <i>Epilepsy</i> .. .. .  |         | 1907 |
| <b>Werthelm and T. Micholltsch, E.</b> | <i>The Technique of Vagino-<br/>Peritoneal Operations.</i> (Tr. by C. Lockyer) |         | 1907 |
| <b>Wilson, T.</b> ..                   | <i>Pelvic Inflammations in the Female</i> .. ..                                |         | 1907 |
| <b>Wynter, W. E.</b> ..                | <i>Minor Medicine</i> .. .. .  |         | 1907 |

## TRANSACTIONS, REPORTS, JOURNALS, &amp;c.

|  |                   |         |
|--|-------------------|---------|
| American Journal of Obstetrics, The .. .. .                  | Vol. LV.          | 1907    |
| American Journal of the Medical Sciences, The                | Vol. CXXXIII.     | 1907    |
| American Pediatric Society, Transactions of the              | Vol. XVIII.       | 1907    |
| Archives of the Middlesex Hospital .. .. .                   | (4) Vol. XI.      | 1907    |
| Boston Medical and Surgical Journal, The .. ..               | Vol. CLVI.        | 1907    |
| Bristol Health Report for 1906 .. .. .                       |                   | 1907    |
| British Gynæcological Journal, The .. .. .                   | Vol. XXII.        | 1906-07 |
| Chicago Pathological Society, Transactions of the            | (1) Vol. VI.      | 1906    |
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| Glasgow Medical Journal, The .. .. .                         | Vol. LXVII.       | 1907    |
| Henry Phipps Institute, Third Annual Report of the..         |                   | 1907    |
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| Journal of Medical Research, The .. .. .                     | Vol. XVI.         | 1907    |
| Journal of Mental Pathology, The .. .. .                     | Vol. VII.         | [1907]  |
| Journal of Obstetrics and Gynæcology, The.. ..               | Vol. XI.          | 1907    |
| Journal of the American Medical Association, The             | Vol. XLVIII.      | 1907    |
| Library Association Record, The .. .. .                      | Vol. VII.         | 1905    |
| Library World, The .. .. .                                   | Vol. IX.          | 1906-07 |
| Medical Chronicle, The .. .. .                               | N.S., Vol. XII.   | 1906-07 |
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| Odontological Society of Great Britain, Transactions of the  | Vol. XXXIX.       | 1907    |
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| Progressive Medicine .. .. .                                 | Vol. III.         | 1907    |
| Royal Academy of Medicine in Ireland, Transactions of the    | Vol. XXV.         | 1907    |
| Scottish Medical and Surgical Journal, The ..                | Vol. XX.          | 1907    |
| Sociedad de Beneficencia de Buenos Aires—Memoria del 1906 .. |                   | 1907    |
| Univ. of Penna. Medical Bulletin .. .. .                     | Vol. XIX.         | 1907    |



## MEETINGS OF SOCIETIES.

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### Bristol Medico-Chirurgical Society.

*Annual Meeting, October 9th. 1907.*

After a vote of thanks to the retiring President, Mr. James Taylor, had been passed, Dr. Waldo took the chair and gave an introductory address (see p. 289). Later a cordial vote of thanks was given to Dr. Waldo for his able and interesting address.

The Honorary Secretary, Mr. H. F. Mole, read his annual report. The balance in hand, on the ordinary account, was £120 18s. 7d. The Society had lost two members through death, viz. Dr. Markham Skerritt and Mr. H. W. Kendall, and nine members had left the Society owing to removal, &c. Sixteen new members had been elected.

The Editorial Secretary of the *Journal*, Mr. James Taylor, read his annual report.

Mr. Munro Smith read the Library report, which showed that there were 20,989 volumes in the library, and that 237 periodicals were regularly received.

The following officers were chosen for the ensuing year : President-elect—Dr. Michell Clarke ; Hon. Secretary—Dr. J. A. Nixon ; Members of Committee—Dr. B. M. H. Rogers, Dr. P. Watson Williams, Mr. C. K. Rudge, Dr. James Swain, Dr. George Parker, and Prof. Walker Hall ; Members of the Library Committee—Mr. C. K. Rudge, Mr. Munro Smith, and Dr. C. F. Carey Coombs.

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*November 13th, 1907.*

Dr. HENRY WALDO, President, in the Chair.

Nearly the whole time of the meeting was devoted to the consideration of a special report of the Library Committee. Printed copies of this report had been previously posted to the members of the Society. The various suggestions made by the Committee for the improvement of the library were considered seriatim, and except for some minor alterations were approved.

Dr. TEMPLE showed microscopic sections of a **pigmented growth** he had removed two years previously from the prepuce of a boy aged 9. The small tumour had followed an injury. A distinguished pathologist had examined the sections, and pronounced the tumour to be a melanotic sarcoma. Such a growth at the age of nine and in the situation described seemed unique.

J. LACY FIRTH.

J. A. NIXON.



**Bristol Royal Infirmary.**—A. Lewin Sheppard, M.B., B.S. Durh., has been appointed Senior Resident Officer and House Surgeon, and A. W. Falconer, M.D. Aberd., House Physician.

**Bristol General Hospital.**—The following appointments have been recently made:—*House Physician*: C. S. Rivington, M.R.C.S., L.R.C.P. *House Surgeon*: J. W. J. Willcox, M.R.C.S., L.R.C.P. *Casualty House Surgeon*: A. E. Iles, M.R.C.S., L.R.C.P. *Assistant House Physician*: W. Bruce Low, M.B., B.Ch. Edin.

**Long Fox Lecture.**—The next Long Fox Lecture will be delivered by Dr. Watson Williams, on Thursday, January 16th, 1908, at 4.15 p.m. in the Medical Library, University College, Bristol. Subject: “*Suppurative Disease in the Nose and Ear, with special reference to newer methods in Diagnosis and Treatment.*”

### BRISTOL.

**Consultations at the Bristol Workhouses.**—At a recent meeting the Bristol Board of Guardians considered a report of the hospital committee, which contained a recommendation to appoint a consultant to be available in case of difficulty occurring in the treatment of patients in the Infirmary wards at either of the two workhouses, or where the workhouse medical officer would like to have the advantage of a second opinion. In the discussion of the report it was stated that there were no suitable operating theatres at the workhouse infirmaries, and that it was the custom to send patients for operation to the Royal Infirmary.

### BATH.

**Bath Royal United Hospital.**—Thanks to the efforts of the Mayor of Bath (Mr. S. W. Bush), this institution is now free from debt. His Worship, at the outset of his mayoralty, announced that his endeavour would be to free the hospital from its debt of £6,124, and we heartily congratulate him upon his success.

**Bath Royal Mineral Water Hospital.**—The governors of this hospital have decided to decrease the number of beds from 155 to 150 from lack of funds, but the Mayor of Bath is making an effort to secure increased support, so that this retrograde step shall not be necessary. It is pointed out that of the present 149 in-patients only one belongs to Bath. It is claimed, therefore, that the hospital is national in its operations, and justly appeals for national help.

**Winsley Sanatorium.**—Alfred Lewthwaite, M.B. Lond., has been appointed Resident Medical Officer to this institution, vice E. D. Townroe, resigned.

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