

The bleeding appeared to stop as the transfusion was given, and gauze packing was gently introduced over the tear. Thanks to the large quantity of blood which had been infused, a dramatic change now took place. The patient became quite warm, his colour improved, and the pulse became easily palpable. The packing was watched for a time, with a degree of equanimity impossible in the early stage of the operation; the abdomen was closed and the patient returned to bed. No reaction followed, and convalescence was rapid and uneventful.

This gratifying result suggests the advisability of using reinfusion in the more severe cases of acute intraperitoneal bleeding, in which the patient urgently needs an addition to the circulating fluids. It is not uncommon to see such patients given various solutions by different routes, while the most suitable fluid of all, their own blood, has been thrown down the sink. Experience has shown that blood can be safely reinfused, even after lying in the abdomen for a considerable time. The question of changes taking place in the blood does not arise in the acute haemorrhage for which this measure is advocated, for the blood is comparatively fresh in these cases. The hurried submammary saline given in the operating theatre, or perhaps in the ward, may sometimes lead to undesirable infection, but we have not seen an infective complication following an intravenous injection. Probably the reason is that blood is not only an unsuitable medium for the growth of bacteria, but has marked bactericidal effect, as shown by Almroth Wright, Colebrook, and Storer.¹ It is known that germs may enter the blood stream, and their growth be kept in check until they are finally excreted by the kidney or by the liver. The slight infection possibly present in acute ruptured ectopic gestations is not necessarily, therefore, a contraindication to reinfusion.

A German gynaecologist, Thies, is given the credit of introducing auto-transfusion in 1914.² Burch published a survey of the literature in 1923.³ Up to this time 164 cases had been reported, 160 of these in Germany, made up chiefly of acute ruptured ectopic gestations and severe injuries and wounds with haemoperitoneum and haemothorax. In these cases there were 14 post-operation deaths, only one of which could possibly have been caused by an infusion. The method was proved to be valuable and safe.

Sir William Taylor of Dublin suggested a further use for reinfusion in splenectomy.⁴ This operation may be very difficult, and attended by much blood loss and shock, especially when the spleen is large and the patient is already suffering from blood dyscrasia. As soon as the spleen is removed it is held by an assistant over a vessel containing citrate solution. The clamp is removed from the pedicle, and the blood is allowed to drip into the vessel, the flow being aided by squeezing the organ. This citrated blood is then reinfused.

Loyal E. Davis and Harvey Cushing found reinfusion a most valuable and life-saving device in the major cranial operations.⁵ The blood is removed from the field of operation by suction rather than by swabbing; citrate solution is sucked up from a basin, swabs and towels are wrung out into the solution, and the mixture is reinjected. The authors show impressive graphs of very severe surgical shock in which immediate and marked improvement followed this reinfusion.

Scant attention has been paid to this method in British literature; in discussions on blood transfusion it is summarily judged and condemned without trial. Thus, in a recent discussion its only notice was a brief reference by Sir Humphry Rolleston to Blain and Brines, who believe that reinfusion is inadvisable.⁶ But Blain and Brines record no more than their beliefs, give no reasons, and have apparently no experience of the method.⁶

Technique.

In giving intravenous injections of large volumes of fluid every effort should be made to prevent those reactions which the patient so often suffers after this treatment. In auto-infusion we are relieved, of course, from every anxiety about the compatibility of the donor.

Probably the next most important point, in giving any intravenous injection, whether of blood or of saline, or of glucose, is to exclude not only living but also dead organisms. The importance of keeping out dead bacteria is at once suggested by experience with intravenous vaccinations—for example, in the treatment of typhoid

fever and of rheumatoid arthritis. The reactions following such treatment and the usual post-transfusion reactions are similar in every way. They appear a few minutes to half an hour after the injection; the patient feels cold and has a rigor, which may be very severe. In practice, therefore, it is not enough that the water used in making the solution should be sterile; it should be freshly distilled before sterilization. Whenever possible it is our practice to have the water distilled on the same day that the injection is given. For emergencies a supply of water, first distilled, then sterilized and sealed, is kept on hand. This should keep indefinitely without bacterial contamination, but, as a routine, it is boiled before use. In two and a half years we have experienced only three marked rigors after infusion of blood or glucose. In one of these glucose dissolved in ordinary tap water had been given in an emergency, and in another blood transfusion had been performed with sodium citrate dissolved in the chemist's stock distilled water. The importance of using freshly distilled water in blood transfusion has not been sufficiently emphasized in the literature; this probably accounts for the unduly high proportion of reactions which follow the use of citrated blood. Even Lewisohn, the great protagonist for this method, reports 23 per cent. of reactions.⁷

Burch states that the use of citrate solution in auto-transfusion is not necessary, for the blood has been given mixed with saline, or defibrinated, or even unmodified. But the citrate method is the most certain, for it eliminates the possibility of clotting, which might cause serious delay or even failure in desperate cases. Moreover, it enables one to give the infusion slowly, and this point is most important, not only to avoid overloading the heart, but also to help to prevent undesirable reactions. French observers (Cruchet and Ragot) declare that even if agglutination and haemolysis take place, no ill effects need follow if the injection is given slowly.⁵ An ounce a minute is the maximum speed permissible when using compatible blood or a suitable solution.

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- ³ William Taylor: *Auto-Infusion of Blood from the Spleen in Cases of Splenectomy*, *Surg., Gynecol. and Obstet.*, November, 1923, p. 695.
- ⁴ Loyal E. Davis and Harvey Cushing: *Experiences with Blood Replacement during or after Major Intra-Cranial Operations*, *Surg., Gynecol. and Obstet.*, March, 1925, p. 310.
- ⁵ *Proceedings of Sections at the Annual Meeting of the British Medical Association*, *British Medical Journal*, November 27th, 1926, p. 869.
- ⁶ A. W. Blain and O. A. Brines: *The Transfusion of Unmodified Blood*, *Archives of Surgery*, January, 1926, p. 140.
- ⁷ R. Lewisohn: *Chills following Transfusion of Blood*, *Journ. Amer. Med. Assoc.*, January 27th, 1923, p. 247.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TRAUMATIC ASPHYXIA.

TRAUMATIC asphyxia is rare, and some of the standard textbooks on surgery and medical jurisprudence do not even mention it. The following details of a case may therefore be worthy of record.

In 1926 a tall, powerfully built young man, aged 28, presented himself at my consulting room. His face was deeply cyanosed and the subconjunctival tissue of both eyes was suffused with bright red blood, giving him a most startling appearance, although he did not appear to feel ill and had walked half a mile to see me. He stated that except for a headache he had been in good health when he went to bed two nights previously; he awoke the following morning in his present condition. He and his family absolutely denied that he was subject to fits, and they could give no clue as to the cause of the seizure. He mentioned that he had suffered from a similar though less severe attack two years previously. He had consulted me seven months before for a small subconjunctival ecchymosis of one eye for which he could ascribe no cause.

On examination it was found that, above a line running round the neck from the level of the upper margin of the cricoid in front to the fifth cervical spine behind, the skin of the head and neck had a deep cyanotic tint, with a few small points of ecchymosis in the scalp behind the ears and over the cranium. The mucosa of the palate, tongue, and pharynx was also of a purplish hue and showed several small extravasations of blood. Below the line of demarcation the skin was perfectly normal. There was no mark of any constricting band.

In the absence of information as to the mode of onset I could not explain the condition until, a few days later, I learned from

neighbours that the patient had suffered from occasional epileptic fits since boyhood. On further inquiry the brother with whom he shared a bedroom admitted that he had been awakened in the early hours of the morning by his brother having a fit. I found also that the patient slept in an ordinary shirt with a rather tight collar-band fastened by a stud. The upper margin of the collar-band coincided with the line of demarcation of the cyanosis. The case then appeared to be one of traumatic asphyxia, the strangulating agent being the unyielding collar-band operating during the congestion and partial asphyxiation of the epileptic fit. An interesting sequel was the development of severe exophthalmic goitre in the patient's mother, aged 60, within a few months of the shock occasioned by her son's seizure.

I sent an account of the case to the late Professor Harvey Littlejohn of Edinburgh, who expressed the opinion that it was undoubtedly "a case of so-called traumatic asphyxia caused by the collar-band compressing the jugulars, together with the partial asphyxia, high blood pressure, and fixation of the chest caused by the epileptic fit."

The few other cases of recovery which have been recorded have occurred likewise in patients between the ages of 15 and 35. The usual cause is severe compression of the thorax and abdomen sufficient to prevent respiration for an appreciable length of time, as when individuals are crushed in dense crowds. In these cases the discoloration extends to the root of the neck and ceases more or less abruptly about the level of the clavicles. A striking example of this was illustrated in an article by Beach and Cobb in the *Annals of Surgery*, April, 1904. Betham Robinson also reported a case in the *British Journal of Surgery*, 1914-15, vol. ii, p. 173, in which the discoloration ended abruptly half-way down the neck at a line corresponding to the top of the collar. On this occasion the thorax was crushed by a lift, and the collar acted, as in my case, as the actual agent of strangulation of the congested and swollen neck. So far as I can ascertain my case is the only one on record which did not originate in compression of the chest and abdomen by external violence.

The limitation of the cyanotic discoloration to the face and neck is due to the absence of competent valves in the jugular and facial veins. This, under certain conditions, permits mechanical over-distension of the smaller veins and capillaries with stasis of de-oxygenated blood. The cyanotic tint of the skin depends on this latter factor and not on petechial haemorrhages into the cutis. It is usually stated that there is no extravasation of blood except under the conjunctivae. In my case, however, there were several distinct extravasations into the cutis of the scalp and under the buccal mucosa.

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Cheadle, Staffordshire.

POLYSEROSITIS IN LATER LIFE.

POLYSEROSITIS, or Concato's disease, is a widespread affection of the pleurae, pericardium, mediastinum, and peritoneum. It occurs, as a rule, in young subjects, and the causal factors are unknown. The following case appears worthy of record in that the patient was aged 60; he had been an habitual drunkard.

The patient was admitted to hospital complaining of abdominal pain, progressive weakness, constipation, and vomiting. He was a thin, wasted man, with a dirty sallow complexion and watery eyes. His facial expression denoted anxiety and continual pain. His skin was dry and hot; the temperature was 100° F. and the pulse rapid. He was dyspnoeic. The duration of the illness was said to be four years, during which time he had had attacks of "pleurisy." There was no history of rheumatic fever.

Upon examination his abdomen was found to be much distended, and the movement poor. There was a generalized doughy resistance to palpation, and vague, irregularly defined masses could be felt. Percussion showed scattered areas of dullness and resonance. There was shifting dullness in the flanks. Neither the liver nor the spleen was palpable. No abnormality was detected upon rectal examination. There was systolic retraction at the cardiac apex, which was fixed, and retraction in the eleventh interspace posteriorly. The cardiac impulse was marked from the third left space to the apex. The area of cardiac dullness was increased. There were no murmurs. There was poor expansion generally over both lungs. Resonance was impaired, with indications of thickened pleurae, especially at the right base. Vocal fremitus was diminished, particularly at the right base, and vocal resonance was diminished generally. The breath sounds were much impaired, but there were no accompaniments. Generalized arterio-sclerosis was present, and the blood pressure was high. The urine was increased in amount, and there was troublesome nocturnal micturition. The specific gravity of the urine was 1005; the water was pale; the urea content was low, and there was a slight trace of albumin.

Diagnosis of this case was easy in view of the adherent pericardium; the evidence of old thickened pleurae; the doughy abdomen, with its areas of dullness and resonance and shifting fluid; the chronic interstitial nephritis, with the history of chronic alcoholism.

The course of the illness in hospital was short. The patient was in considerable danger from uraemia, which, however, did not develop. Symptomatic treatment only was possible, and paracentesis was performed when this was indicated. The evening before he died the patient developed Cheyne-Stokes breathing. Death resulted from exhaustion and cardiac breakdown.

At the necropsy there was found an adherent pericardium, with thickening of the mediastinal tissues. The heart was greatly hypertrophied, but there was no valvular disease. The pleurae were thickened and adherent, and there was a small collection of fluid on the right side. The pleura was adherent to the diaphragm; the lungs were otherwise sound. The peritoneum was much thickened and pearly white; the omentum was rolled transversely across the abdomen. Adhesions of all degrees were generalized throughout the abdomen, binding the intestinal tract and causing considerable kinking. Much free fluid was present, and there were many collections of encysted fluid. The liver was of the "sugar-ice" character and contracted. The capsule stripped with some difficulty; it was adherent to the diaphragm and slightly fibrotic. The spleen showed similar changes. The stomach was characteristic of chronic gastritis. Adhesions involved the stomach, pylorus, gall-bladder, and pancreas. The caecum and appendix were greatly thickened. The kidneys were small; each weighed 2 oz. They were red and the capsules were adherent. On section they were found to be tough, with a reduced cortex and prominent vessels.

In so late a case of polyserositis there was, of course, no difficulty in diagnosis; in early stages the diagnosis cannot be easy. It is hard to believe that this generalized polyserositis could have been caused by chronic alcoholism, though alcohol is a certain factor in the production of perihepatitis and diffuse peritonitis, with interstitial nephritis. In this case the disease may have spread from a local area. It is held by some that interstitial nephritis, by its toxic effect upon the patient, may cause polyserositis; some physicians consider that, in the absence of jaundice, "sugar-ice" liver is associated with, and the consequence of, interstitial nephritis.

London, S.W.

B. GORDON EDELSTON, M.D.

TOTAL CONCEALED ACCIDENTAL HAEMORRHAGE SIMULATING OVARIAN TUMOUR.

SINCE total concealed accidental haemorrhage only occurs on an average once in fifteen thousand pregnancies the following case appears worthy of record.

A multipara with five children was admitted to hospital as an "acute abdomen," with the history of an operation for perineal repair three months previously at a metropolitan hospital, where she was not considered pregnant although two periods had been missed at that time.

After five months' amenorrhoea without any other symptoms of pregnancy—though these had been very marked in former gestations—the present illness began with a week's malaise and then sudden sharp pain of a "stretching" character which was referred to the lower part of the abdomen, especially on the right side. The patient's normally rather sallow face showed little loss of colour, but was of the typically abdominal type; the pulse was only 88. The abdomen was distended and rigid, with an indefinite fluctuating tumour extending above the umbilicus and to the right side. The os uteri was hard and "pin-point," and there was no bleeding; both fornices were intensely tender, and there was a hard mass in Douglas's pouch. The most obvious symptom was the pain, which was constant and intense. The diagnosis of a twisted ovarian right-sided tumour with haemorrhage into it appeared to be justified by the presence of a painful swelling after five months' amenorrhoea without other signs of pregnancy; the mass in Douglas's pouch was thought to be the retroverted fundus.

At the time of operation forty-eight hours later a trace of blood was found for the first time on vaginal examination. The abdominal incision exposed a thin-walled, flabby, greyish-red tumour extending from the right side of the pelvis to beneath the liver. The tumour was still thought to be ovarian, and it was only after drawing off about two pints of blood from the apparently thin-walled cystic tumour that its true nature was revealed by feeling the foetus. The placenta, situated over the internal os, and the foetus were removed through an incision in the uterine wall, which was so thin that only one layer of sutures could be introduced. Injections of hot saline solution and pituitrin directly into the uterine wall caused good contraction, and the subsequent recovery was uneventful.

Proof that the uterine wall had recovered its thickness and tone was seen recently in a subsequent labour of nearly a week's duration; a 12 lb. full-time child had to be delivered by internal version.

LLEWELLYN W. ROBERTS, M.B., M.R.C.S.

Cowra, New South Wales.

sermon is always enjoyed for the same reason. As I have said, only about 4 per cent. of those who receive reprints will read them; and very few even of these will take the trouble to send flattering remarks to the author. Let him remember that we are speaking of averages. If he sends out a hundred reprints, it may be that these four persons, plus four more, are in the next hundred whom he has not circulated; why take so much trouble to court a possible tragedy?

On the other hand, the man who is merely afflicted with laudable ambition may possibly point to Mendel's fate, and contend that if he had judiciously planted a few reprints where they would have done most good, he would not have had to wait till he was dead before receiving proper recognition. Well, of course, there is something in this, though he should have sent his paper to a journal with a decent circulation.

Because, however, there is something in it, we should not attempt to suppress the plague by abolishing reprints altogether; we must choose a remedy which, if not pleasant, is at least harmless. Why not take a leaf out of the procedure of the film trade? I would suggest the setting up of a competent board of scientific censors, whose duty would be to license reprinting by issuing "certificates for universal exhibition" in the case of papers of sufficient merit to warrant it. Having obtained this licence, the happy author could, with a clear conscience, send his reprints to as many people as he liked in the sure knowledge that they ought to read his paper, even if they don't want to.—I am, etc.,

Surbiton, Sept. 1st.

E. W. ADAMS, M.D.

THE ERECT POSTURE.

SIR,—Many of your readers must have perused with pleasure Professor Colin Mackenzie's interesting and suggestive lecture on the importance of zoology to medical science (*Journal*, September 22nd, p. 534). With regard to the acquisition of the erect posture by infants, may I recall what Harvey says in his *Generation of Living Creatures* (1653), "their first venture to foot it represents them a prone kind of cattell which can scarce exalt themselves to the erection of a cock."

I would like to thank the lecturer for his praise of football, of the benefits of which it is proposed to deprive our police.—I am, etc.,

London, W., Sept. 21st.

HERBERT R. SPENCER.

SECURITY OF TENURE IN PUBLIC POSTS.

SIR,—I notice in your Educational Number that there are given particulars of the various public services open to members of the medical profession. The prospects are, in many cases, enticing, embracing as they do a pleasant, care-free life with gradually rising salary and a pension at the end. But a word of warning should be given to those who think of entering any public service: first of all, inquire what security of tenure is offered.

In services such as the army and navy there need be no doubt. No one can be deprived of his position without a full and open inquiry, and then only for grave misconduct. A large number of public appointments are nowadays held under local authorities, and here, though the doctor is compelled to contribute to a pension fund, there is no security of tenure whatever. A doctor may be given three months' notice at any time, no matter how many years he may have been in the service. If the authority be so minded it can give the doctor three months' pay in advance and tell him to clear out at once. A doctor in one of these services is in just the same position as one's housemaid, to whom one may give notice or give pay in lieu of notice. In entering the service he places his professional reputation in the hands of the authority, and there is none to whom he can apply for help if he is suddenly dispensed with. Though the authority is a public body it functions as a private employer, and it cannot be forced to give any explanation for its action. There is no legal redress whatever for the doctor, no matter how seriously his reputation may have been damaged. That the danger of such an occurrence is very real may be learned

by a perusal of some of the reports of medical protection societies.

The promise of a pension which may have been the main inducement to joining the service is thus ephemeral. In law there is nothing to prevent the authority escaping its obligation by giving the doctor three months' notice to leave, just before he becomes eligible for his pension. That, of course, is an extreme case, but the practical inference is that the longer the doctor stays in the service the less secure is his position and the greater the inducement of the authority to get rid of him. As the work in many of these parochial services is of a specialist nature the doctor, after many years spent in one particular branch of medicine, is less able, should he lose his post and his pension, to take up general practice than would be a doctor who had been in practice all his professional life.

Needless to say the doctor's consciousness of his precarious position has a prejudicial effect on his independence of action. To amplify the housemaid analogy: it is as if one said to her, "I will pay you so much a week, but every week you must return to me part of your wages. When you have reached the age of 60 and have done thirty years' service I will give you a pension. But I reserve the right to give you a week's notice at any time. If I do so, your chances of getting employment anywhere else will be very small." Most people would say that the housemaid who entered such a service showed a child-like faith in her employer.

For the benefit of those of your readers who may be a little hazy as to who constitute "local authorities" I would say that they are such bodies as boards of guardians, county, borough, and town councils with their subsidiaries, public health, watch, and asylum visiting committees.—I am, etc.,

Wedmore, Sept. 18th.

H. C. McMANUS.

THE PETTIGREWS.

SIR,—In his interesting *Nova et Vetera* article on the Brompton Medical Book Society in your issue of September 15th (p. 494), "H. R." refers to Dr. William Vesalius Pettigrew of Chester Street. This gentleman was mentioned in a previous *Nova et Vetera* article in the *British Medical Journal*, on "An Old Directory," on January 13th, 1900, and he was the subject of an interesting correspondence in the issues of January 20th and 27th of that year. He was the son of a more distinguished man, Thomas Joseph, known as "Mummy" Pettigrew, from his having given a lecture and demonstration on that subject at the Royal Institution, when he spent some hours in unrolling 900 yards of bandages. William Vesalius, his son, claimed the authorship, in his entry in the first (1845) *London Medical Directory*, of an "anonymous" work on the diseases of children.

"H. R." comments on the moral courage of the founders of the Brompton Society in fixing the number of its members at thirteen. The ridiculous superstition connected with this number was then much more limited in its scope than it is in this credulous age. Ill luck was confined to the first to rise of a party of thirteen at table. The analogy of the Last Supper is obvious enough. So far from thirteen having been anciently an unlucky number, it seems to have been chosen as auspicious, being the number of Christ and his Apostles, and was quite commonly the number for which provision was made in founding almshouses and such like.—I am, etc.,

London, S.W., Sept. 20th.

E. MUIRHEAD LITTLE.

Universities and Colleges.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

THE session 1928-29 opens at University College, London, on Monday, October 1st. Students of the Faculty of Medical Sciences will be received by the Provost and Dean on that day as follows: First-year students between 10 a.m. and 1 p.m.; students of later years between 2.15 and 4 p.m.

Public lectures that have been arranged for the first term include a course on "Smoke pollution of the air and public health," by Dr. John Owens on November 2nd, 9th, and 14th at 5.30 p.m.; Sir Napier Shaw will preside at the first lecture. Particulars of

these and other public lectures may be had on application to the secretary, University College, London, W.C.1. A stamped addressed envelope should be enclosed.

The following elections in the Faculty of Medical Sciences of the College have been made:

Entrance Scholarship (£30 a year for three years): C. Qvist (first year); F. R. Bettley (second year). Bucknill Scholarships: E. Galinsky (100 guineas); D. A. Andersen (60 guineas). Exhibitions (55 guineas each): Freida Yarmalinsky; J. W. James. Epom Scholarships: C. B. Lanyon (second year); D. Joy (first year; awarded subject to completion of the First Medical Course examination in December, 1923). Sharpey Physiological Scholarship (£115): E. Ogden, B.Sc. Percy F. Macgregor Research Scholarship in Embryology (£50): Frances E. Ince, B.Sc.

The Services.

MEMORIAL TO JAMES LIND.

An altar painting in memory of Dr. James Lind, the "father of nautical medicine," was unveiled on September 23rd by Surgeon Rear-Admiral A. J. Hewitt, in the chapel of the Royal Naval Hospital at Haslar, where Lind was physician from 1758 to 1783.

James Lind was born in Scotland in 1716, and at the age of 15 was registered as an apprentice to a Fellow of the Edinburgh College of Surgeons, subsequently becoming a surgeon in the navy, with which he served until about 1747. He resided in Edinburgh for the ten years from 1748, and during this period graduated M.D., was elected a Fellow of the College of Physicians, and published *A Treatise on the Scurvy*, the first written by a physician with experience at sea. Its importance may be gauged from the fact that in the then recent naval war scurvy had proved a more deadly enemy than the French and Spanish fleets. Lind's suggested remedy was the use of oranges, lemons, green food, and onions, or, in their absence, of lemon juice. In 1757 he published *An Essay on the most effectual means of preserving the Health of Seamen in the Royal Navy*, and a year later was appointed physician at Haslar. He contributed papers on fevers and infection to the Philosophical and Medical Society of Edinburgh; described a simple method of supplying ships with fresh water by distillation, following his discovery that the steam from salt water was fresh, to the Royal Society in London in 1762, and six years later published *An Essay on Diseases Incidental to Europeans in Hot Climates*, which, like his treatise on scurvy, attracted notice throughout Europe. It is interesting to recall, as illustrating the versatility of the medical profession, that a contemporary of Lind's of the same name, born in Scotland twenty years after him—and, like him, an M.D. of Edinburgh and a Fellow of the College of Physicians in that city—served as a surgeon with the East India Company, visiting China in 1766. This second James Lind afterwards published *A Treatise on the Fever of 1762 at Bengal*, became physician to the royal household at Windsor and a Fellow of the Royal Society of London, and was an intimate friend of Shelley. He achieved some distinction also in the fields of astronomy, meteorology, and geography, and took part in an expedition to Iceland.

DEATHS IN THE SERVICES.

Brigade Surgeon Lieut.-Colonel James Arnott, Bombay Medical Service (retired), died at Wyseley House, Kirtlebridge, Dumfriesshire, on August 18th, aged 83. He was born in 1845, and educated at Glasgow, where he graduated as M.D. and C.M. in 1866, and entered the I.M.S. as assistant surgeon on April 1st, 1867, attaining the rank of brigade surgeon in 1891, and retiring in 1898. He served in the Abyssinian campaign of 1867-68, receiving the medal, and in the Afghan war of 1879-81, when he took part in the defence of Kandahar, the sortie of Dih Khoja, and the battle of Kandahar. He was mentioned in dispatches in the *London Gazette* of December 3rd, 1880, and received the medal with a clasp. In 1896 he was granted a good service pension, and at the time of his death had drawn such a pension longer than any other officer in the Indian army except one. For fifteen years after his retirement he was medical adviser to the Colonial Office for Scotland, and he had served on the board of governors of the Simpson Memorial Hospital and the Victoria Hospital for Consumptives in Edinburgh. He leaves a widow, one son (who is a major in a Gurkha regiment), and three daughters. Lieut.-Colonel Arnott came of a family which had been settled in Dumfriesshire, in and around Ecclefechan, for nearly two centuries, and which had given several medical officers to the East India Company's service. His father, Surgeon John Arnott, entered the Bengal service in 1837, and died while still comparatively young in 1845. His uncle, Francis Shortt Arnott, entered the Bombay service in 1829, and rose to be inspector-general, after serving in the Punjab war of 1848-49, in the siege of

Multan and at the battle of Gujerat; and in the Indian mutiny of 1857-58, in Central India, and the long campaign in pursuit of Tantia Topi. Another James Arnott, of the previous generation, was in the St. Helena Medical Service, where he was superintending surgeon, and retired in 1835, after the company handed over the island of St. Helena to the Crown. He was said to have taken part in, or been present at, the *post-mortem* examination of Napoleon, and lived till 1883.

Colonel John Herbert Whitehead, D.S.O., formerly of the R.A.M.C., died in Brompton Hospital, London, after an operation, on July 11th, aged 58. He was born at Addiscombe on September 30th, 1869, educated at Charing Cross Hospital, and took the M.R.C.S. and L.R.C.P. Lond. in 1893. After serving as house-surgeon and house-physician at Charing Cross, he entered the army as surgeon lieutenant on January 29th, 1895, but resigned his commission in the following year, on June 17th, 1896. He then went to South Africa, and settled in practice at Johannesburg. On the outbreak of the Boer war he was ordered to join the Boer army or clear out of the country. He chose the latter course, and made his way to Ladysmith, arriving there in the last train which got through before the siege. He took service with the British troops as a civil surgeon, and served throughout the siege of Ladysmith, and until peace was made in 1902. He then joined Baden-Powell's police as medical officer. When that force was disbanded he was stationed at Harrismith in the Orange River Colony, and started in practice in that town, also going in for municipal work, and being elected mayor. When the recent great war began in 1914 Harrismith was occupied by the rebel forces. He escaped, joined Botha's troops, and served throughout the suppression of the rebellion and the conquest of German South-West Africa. He was prevented by illness from accompanying the South African contingent to Egypt and Europe, and on his recovery went to German East Africa in command of a field ambulance, and for his services in that campaign received the D.S.O., subsequently serving as A.D.M.S. at Dar-es-Salaam, and during the demobilization as A.D.M.S. at Durban. After the war he bought a farm at Plains, Natal, and settled there, practising his profession and farming. In 1900 he married Maude Kathleen Love, who had served as a nurse with him on the hospital ship *Avoca*, and leaves a widow and two daughters.

Lieut.-Colonel Manmatha Nath Chaudhuri, Indian Medical Service (retired), died at Mussorie, in the United Provinces, India, on June 30th, aged 56. He was born on July 26th, 1871, and educated at the Calcutta Medical College and at Edinburgh University, where he graduated as M.B. and C.M. in 1897. Entering the I.M.S. as lieutenant on July 27th, 1899, he became lieutenant-colonel after twenty years' service, and retired on January 27th, 1927. During the recent war he served in Mesopotamia, and afterwards in Waziristan, on the North-West Frontier, in 1919-20, and was twice mentioned in dispatches—in the *London Gazette* of August 15th, 1917, and of June 10th, 1921. Most of his service was spent in civil employ in the Madras Presidency, where, before his retirement, he held the posts of professor of pathology in the Madras Medical College and superintendent of the Government General Hospital, Madras.

Lieut.-Colonel Jarlath French-Mullen, Bengal Medical Service (retired), died in Ireland on June 4th, aged 72. He was born in 1855, the fourth son of Lawrence Mullen of Tuam, and educated at Queen's College, Galway, graduating M.D. and M.Ch. of the Queen's University, Ireland, in 1873, when he was only 17. He entered the Colonial Service in 1874, and served as a district surgeon in Jamaica for three years. In 1877 he entered the Army Medical Department, passing in first, but resigned after the Netley course in January, 1878. He entered the I.M.S. as surgeon on March 30th, 1878, again passing in first, attained the rank of lieutenant-colonel after twenty years' service, and retired in 1906. His whole service was spent in civil employment in Bengal, where he held the civil surgeoncies of Rajshahi and Bardwan successively, for many years, during the latter half of his service. He was the author of two books of verse, published under the pseudonym of "Iahrfaith"—*Eastern Sunsets* (1903), and *White Roses* (1905). Jarlath French-Mullen was the youngest of four brothers, all of whom entered the public medical services. The eldest, St. Laurence, was a staff surgeon in the navy. After his retirement he contested South Dublin, without success, as a Parnellite, in 1892. The second and third brothers were both in the Bengal Medical Service. Thomas French-Mullen entered in 1866, retired in 1896, and died two months later. The third, Douglas French-Mullen, entered in 1877, retired in 1912, and died in 1920. These two both spent their service in Indian native States, under the Foreign Department. All four brothers entered the services under the name of Mullen, and added "French" to their names in 1890.

Protection Committee, and for various other things he never spared himself, his time, or his money. It may be added that he was largely responsible for the building of the Edinburgh X-ray Department. Probably the most valuable bit of work he ever did was initiating the first International Congress on Radiology in London in 1925. It is not too much to say that this congress would never have been held except for Knox. He insisted, and eventually induced all British radiologists to support him. The congress was an outstanding and brilliant success, and it owed more to him than to anyone else. He managed to attend the second congress in Stockholm this year, but, although he was able to read a paper there on therapy, it was obvious to all his friends that he was seriously ill, and that it was only his indomitable will which had carried him through.

Dr. A. E. BARCLAY, lecturer in radiology in the University of Manchester, writes:

There is not a radiologist in this country who will not feel the loss of Robert Knox, that quiet, wise counsellor, that hearer of grievances, that man who could wait and wait till passion had gone and reason could have its say. His work for radiology, and for every man associated with radiology, was his mission in life, and to this end he gave of himself unstintingly seven days a week. Waking and sleeping, it was radiology in one form or another that was in his mind, and more particularly in these last few years when he spent so much thought on radiology in relation to cancer. What a willing horse he was! If there was a job to be done he would rather do it himself than worry others into doing work which was obviously theirs, not his, to undertake. If he had a fault it was that of undertaking too much; yet his accomplishment was such that he managed somehow to keep up with all the varied interests with which his name is so closely associated. Yes, Robert Knox will be missed, sadly missed, but he has done a great work, and we must be thankful for it.

Dr. G. B. BATTEN, past-president of the Röntgen Society, writes:

Dr. Robert Knox at the Royal Northern Hospital was one of the first to produce x rays by employing the alternating current from the mains. He followed Dr. Low as honorary secretary of the Röntgen Society, helped to found the British Association for the Advancement of Radiology and Physiotherapy, and, with Sir Archibald Reid, established the British Institute of Radiology. He was also prominently associated with the amalgamation of the Röntgen Society and the British Institute of Radiology. He was a ruling, if not the ruling, spirit in both these societies, and in the Electro-therapeutic Section of the Royal Society of Medicine. His colleagues quickly learnt to appreciate him for his breadth of vision, thoroughness, and balance; we all came to love this very quiet, modest, and efficient man. He brought to bear on every problem, whether clinical or of policy, a kindly dignity which evoked calmness and good results. Abroad he was probably the best known British radiologist, and he will be greatly missed.

Dr. ARCHIBALD DUNBAR WALKER, who died at his residence in Hampstead on September 21st, where he had been living since his retirement, had spent nearly forty-five years in practice in London. The son of a surgeon in the East India Company's service, he was born in India in 1847. He received his medical education at the University of Edinburgh, graduating M.B., Ch.B. in 1868, and proceeding M.D. in 1871, having obtained the diploma M.R.C.S.Eng. in 1870. After some years as a medical missionary in Palestine, he commenced practice in London, where he spent forty-three years in the Ladbroke Grove and Notting Hill districts. He was a Fellow of the Royal Society of Medicine and a member of the Harveian Society, and also, during his active professional life, a member of the British Medical Association. Dr. Walker was the author of several books, including *Egypt as a Health Resort* and *The Parent's Medical Note Book*, and several contributions from his pen appeared in the *British Medical Journal*

almost fifty years ago. His sister, Dr. Eliza Walker Dunbar (who assumed the name Dunbar in 1874) died in August, 1925, in her eightieth year, at Clifton, Bristol, where, in spite of her age, she was still engaged in practice; she was among the pioneer medical women in this country and was practising so long ago as 1873. Dr. Walker's eldest son, Lieut.-Colonel N. Dunbar Walker, R.A.M.C., has carried the family connexion with the medical profession into the third generation.

The following well-known foreign medical men have recently died: Professor CHARLES ERNEST FIRKET of Liège, formerly president of the Belgian Royal Academy of Medicine, and one of the most eminent savants in Belgium, aged 76; Dr. A. RUVAULT, formerly president of the French society of laryngology, and the author of several articles on diseases of the throat; Professor SIBENMANN, a Basle laryngologist, aged 76; Dr. JEAN JACQUES MATIGNON of Châtell Guyon, formerly medical adviser to the French Legation at Peking, where he distinguished himself during the siege by the Boxers, and the author of several works on life in China, aged 61; Dr. FROMASER, a Bordeaux ophthalmologist; Colonel CARL BOHNY of Basle, senior medical officer of the Red Cross; Professor PAUL KUCERA, director of the Prague Institute of Hygiene; Professor E. BARTH, a Berlin physiologist, aged 65; Dr. JOSEPH MERCKX, a Brussels oto-rhino-laryngologist; Professor O. KILIANI, formerly professor of surgery at New York; Professor G. ROSSIER, a Lausanne gynaecologist, aged 65; Professor EMIL FROMM, director of the Institute of Medical Chemistry; and Professor L. BURGENSTEIN, an authority on school hygiene at Vienna.

Medical News.

SIR WILLIAM WATSON CHEYNE, Bt., F.R.C.S., will preside at the opening of the winter session at King's College Hospital Medical School, Denmark Hill, S.E., on Wednesday, October 3rd. Professor Ernest Barker will deliver the introductory address at 2.30 p.m.

THE winter session of the London (Royal Free Hospital) School of Medicine for Women opens on Monday, October 1st, at 3 p.m., when Dr. Andrew Balfour, C.B., C.M.G., will give the introductory address on "The tropical field: its possibilities for medical women."

THE annual prize distribution at St. George's Hospital Medical School will be held in the board room of the hospital on Monday, October 1st, at 3 p.m., when the inaugural address, entitled "Hydrocephalus: a study in phylogeny and pathology," will be delivered by Sir John Bland-Sutton, Bt., F.R.C.S. The annual dinner will be held the same evening at the Hyde Park Hotel at 7.15 for 7.45 p.m., when the chair will be taken by Dr. W. S. Fox.

THE introductory address at the Royal Veterinary College, Great College Street, Camden Town, N.W., will be given by Sir Merrik R. Burrell, Bt., chairman of the General Purposes Committee of the Board of Governors, on Tuesday, October 2nd, at 3 p.m. The chair will be taken by Sir Archibald Weigall.

THE inaugural address at the opening of the eighty-seventh session of the School of Pharmacy of the Pharmaceutical Society of Great Britain will be given by Mr. Reginald R. Bennett, B.Sc., F.I.C., chairman of the Pharmaceutical Conference, at 17, Bloomsbury Square, London, W.C., on Wednesday, October 3rd, at 3 p.m. The presentation of the Pereira Medal will take place on the same occasion.

THE Harben Lectures on studies in asthma and related diseases before the Royal Institute of Public Health will be given at 37, Russell Square, W.C.1, by Dr. Arthur T. Henderson on October 23rd, 26th, and 30th, at 4 p.m. A course of lectures on industrial diseases will commence on October 17th at 4 p.m., when Dr. E. Graham Little, M.P., will deal with the health of the medical practitioner.

AT the meeting of the Royal Sanitary Institute to be held on Friday, October 5th, in the Town Hall, Lowestoft, a discussion on economy in refuse disposal will be opened by Mr. S. W. Mobbs. The chair will be taken at 5 p.m. by Professor A. Bostock Hill, M.D.

SIR JOHN W. THOMSON-WALKER, F.R.C.S., has been appointed a Deputy Lieutenant for the County of London.

FROM October 1st the administrative offices of the Medical Research Council, hitherto at York Buildings, Adelphi, will be at 38, Old Queen Street, Westminster, S.W.1 (Telephone: Victoria 5027). The offices of the Industrial Fatigue Research Board will also be at the new address.

A COURSE of elementary lectures on infant care will be given by Dr. Prudence Gaffikin, in the Lecture Hall, Carnegie House, 117, Piccadilly, W.1, on Thursdays, from 7.30 to 8.30 p.m., from October 11th to December 13th.

A COURSE of post-graduate lectures on nutrition, intended for health visitors, nurses, midwives, and superintendents of infant welfare centres, will be given at the Infants Hospital, Vincent Square, Westminster, S.W., on Mondays, from October 8th to December 10th, from 6.30 to 7.30 p.m.

A NEW course of lecture-demonstrations, arranged by the South-West London Post-Graduate Association at the St. James's Hospital, Ouseley Road, Balham, S.W.12, will begin on Wednesday, October 24th, at 4 p.m., when Professor V. H. Mottram will speak on the white and brown bread controversy. The lectures will be continued on succeeding Wednesdays, at the same hour, until December 4th.

THE course of post-graduate lectures at the Ancoats Hospital, Manchester, for the session 1928-29 will open on Thursday, October 4th, at 4.15 p.m. The series consists of three lectures by Dr. W. J. S. Reid on diseases of the sympathetic nervous system, to be given on October 4th, 11th, and 18th, two lectures by Mr. Diggle on ear, nose, and throat diseases, on October 25th and November 1st, and two lectures by Dr. Renshaw on November 8th and 15th, one on recent advances in medical and surgical antisepsis and the other on urine, with special reference to laboratory aids to diagnosis. There is no fee for the course, to which medical practitioners and senior students are invited. Tea will be served each day at 3.45 p.m.

A THREE-DAY post-graduate course will commence at St. Mary's Hospital, Paddington, on Saturday, October 6th, when the following subjects will be dealt with. At 11 a.m. Dr. Reginald Miller will speak on the intestinal child; at 12 noon, Sir William Willcox on food poisoning and paratyphoid infections; at 2.15 p.m., Dr. A. Hope Gosse on prognosis in heart disease; and at 3.15 p.m., Mr. R. M. Handfield-Jones on recent advances in everyday surgery. On Sunday, October 7th, Mr. Aleck Bourne will discuss, at 10.15 a.m., the new ovarian hormones; at 11 a.m. Dr. C. M. Wilson will deal with some common difficulties in diagnosis; and at 12 noon Dr. Zachary Cope will give a demonstration of clinical cases and pathological specimens. On Monday, October 8th, the subjects to be dealt with include the use of radium in malignant disease, by Mr. Duncan C. L. Fitzwilliams, at 11.15; some surgical obsessions, by Professor C. A. Pannett, at noon; the nature and relief of some common gastric symptoms, by Dr. John Ryle, at 12.15 p.m.; and at 3.15 p.m., some pitfalls in obstetrics, by Dr. T. G. Stevens. The meetings will be held in the library of the Medical School, and are open to all medical practitioners without fee.

THE Fellowship of Medicine and Post-Graduate Medical Association announces that at the Prince of Wales's General Hospital, Tottenham, there will be an all-day course in medicine, surgery, and the specialties from October 8th to 20th. During the same period the Chelsea Hospital for Women will hold a course in gynaecology. From October 8th to 27th there will be a special course at the Central London Throat, Nose and Ear Hospital, consisting of clinical, practical operative, and pathology sections. On Tuesdays and Thursdays in the four weeks from October 9th the Tropical Hospital will hold a course of clinical instruction in tropical diseases, and from October 15th to 27th the Hospital for Sick Children, Great Ormond Street, will provide a special morning course of children's diseases. Professor Louise McIlroy will give four lecture-demonstrations on ante-natal treatment at the Royal Free Hospital, beginning on Friday, October 26th. From October 29th to November 10th there will be a practitioners' course in medicine, surgery, and the specialties at the Hampstead General Hospital in the afternoons. In addition, weekly clinical demonstrations at various hospitals, demonstrations on Wednesday afternoons at the Wellcome Museum of Medical Science, and a series of lectures on Mondays at 5 p.m. at the Medical Society, 11, Chandos Street, W.1, have been arranged, all being open to members of the medical profession without fee. Syllabuses of these and of all courses may be obtained from the Fellowship of Medicine, 1, Wimpole Street, W.1.

A POST-GRADUATE course on rheumatism, including the etiology, pathology, differential diagnosis, and surgical and orthopaedic treatment of chronic arthritis, will be held at Aix-la-Chapelle from October 18th to 20th. The fee is M.10. Further information can be obtained from the Rheuma-Forschungs-Institut, Landesbad, Aachen.

AMONG the speakers from foreign countries at the second international conference on light and heat in medicine, surgery, and public health, to be held in London from October 29th to November 1st, will be Dr. Franz Nagelschmidt of Berlin; Professor Jesionek of Giessen, who will contribute a paper on ultra-violet therapy in dermatology; and Dr. Wilhelm Flaskamp of Erlangen, who will speak on conservative treatment in gynaecology, with special reference to the use of light and heat. The chair, at the opening ceremony of the exhibition, will be taken by Dr. F. E. Fremantle, M.P. The honorary organizing secretaries are Drs. W. Kerr Russell and R. King Brown.

AT the recent Model Engineering Exhibition held in the Royal Horticultural Hall, Westminster, the Admiral Bacon cup for the best amateur work, and a silver medal, were awarded to Dr. C. Nepeau Longridge for his working model of the Blue Funnel steamship *Meriones*.

THE minutes of evidence taken by the Departmental Committee on Ethyl Petrol during the four public sessions held in April, May, and June have now been published, and are obtainable from H.M. Stationery Office (price 5s. 6d. net); they comprise the evidence heard prior to the preparation and issue of the interim report (Cmd. 3159), which was reviewed in the *Journal* of August 4th (p. 219). Among the witnesses examined were representatives of the manufacturers and importers of ethyl petrol, of the United States public health service, and of certain Government departments, including Dr. J. C. Bridge, of the Home Office; evidence was also given by Sir William Pope, Professor H. B. Baker, Professor G. I. Finch, and Dr. Myer Coplans. Reports of the proceedings were published in the *Journal* after each meeting of the Committee, but the minutes of evidence now available give a much fuller account; they are accompanied by the memorandums submitted by various witnesses, and disclose many points of interest to those who are concerned with this problem.

MR. BERNHARD BARON has by deed transferred the sum of £575,000 Four per Cent. Consolidated Loan to trustees for the foundation of a trust to be called "The Bernhard Baron Trust for Hospitals and Asylums for Orphans and Crippled Children." It is provided that during the next twenty years the total amount available for distribution shall be approximately the same each year, and the trustees shall in every year apply such part of the capital and income of the fund as they deem fit for the benefit of hospitals of various kinds and homes and institutions for the care of orphaned and crippled children. The money available is directed to be applied in the proportion of 75 per cent. among Christian and undenominational hospitals, homes, and asylums, and 25 per cent. among similar institutions under Jewish control. The Marquess of Reading is nominated chairman of the board of trustees, and the annual distribution will take place on December 5th of each year, which is the anniversary of the donor's birthday.

A REGISTERED medical practitioner named Joseph Randolph Morell Mackenzie appeared before Mr. Campion at the Tower Bridge Police Court, on September 17th, in answer to summonses under the Dangerous Drugs Act for failing to enter in a register particulars of various purchases of morphine sulphate. It was stated that when the summonses were served the defendant showed entries in a memorandum book relating to the purchases in question, admitting that they had been made after an inquiry had been started by the police. Mr. Davis, defending, said the practice of medical men was extremely lax in these matters, and urged that the Act referred to supplying drugs and not to purchasing them; he added that the defendant did not realize what the regulations implied. The magistrate thought that doctors must be well aware of the import of the regulations. Answering questions, the defendant said that he had not kept a register for the past nine years, and that the Act did not apply in Northern Ireland, where he had been. Mr. Howe, who represented the Director of Public Prosecutions, mentioned that Dr. Mackenzie had been charged at Ramsgate in April with stealing tablets of morphine sulphate, and in June was sent to a home for drug addicts until he could be certified as cured, when he was released under the Probation Act. The defendant was remanded for three months on his own and one other surety in £50 each, a colleague promising to look after him.

ABOUT 250,000 cases of dengue are reported as having occurred in Greece in the course of three weeks.

DR. F. D'HERELLE of Paris, who is well known for his study of the bacteriophage, has been appointed professor of bacteriology at Yale University.

INSPECTOR-GENERAL DOPFER, the well-known French epidemiologist, has been nominated director of the health service of the military government of Paris.