MELBOURNE HOSPITAL MEMORIES

BY

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MEDICAL SUPERINTENDENT, 1908-12

The Melbourne Hospital deservedly enjoys a very high reputation throughout Australia and New Zealand, but its fame is not confined to the great Commonwealth or to the Dominion. Medical graduates with Melbourne Hospital training have won honoured recognition in many parts of the Empire, notably so in the capital city of London. The estimation in which this hospital is held is, in my opinion, firmly based upon its surgical tradition and practice. In a young and rapidly growing community, such as the State of Victoria has been during the past fifty years, the results of surgical operative skill have gained more adherents than those achieved by the less spectacular methods of the physician.

Hence has arisen in Melbourne a predilection for surgical work and an unquestioned capacity on the part of the young Victorian surgeon to master the most daring procedures, the newest methods, and the most complicated technique of his art. The outstanding ability of its surgical staff has been the keystone of the foundation upon which the fame of this hospital has been built. It is, however, the pre-war generation of surgeons who worked in the old Melbourne Hospital buildings (before the great reconstruction, begun in 1911, gave to the city its present magnificent blocks of wards, operating theatres, etc., but at the same time unfortunately destroyed its beautiful lawns and fine old elm trees) whose memory I particularly desire to recall. During the twenty years previous to 1914 they raised this institution to a pre-eminent position, not only in the State of Victoria but, with the possible exception of the State of New South Wales, throughout the greater part of Australia. Such names as those of Sir Thomas Fitzgerald, Sir Charles Ryan, Fred. Bird, William Moore, Robert Stirling, and Sir George Syme were household words of example and admiration wherever Melbourne Hospital graduates were practising the art and science of surgery.

Surgical Accommodation Before the War

At this period, in conformity with the ideas of the pre-surgical era, the majority of the hospital's 320 beds were occupied by medical cases. Typhoid fever was very prevalent, and I have seen a whole ward practically filled with patients suffering from this disease. The cold bath treatment then in fashion was a difficult problem for the nursing staff. A persistent administrative difficulty, in spite of a yearly admission total of over 8,000 patients, was the constant shortage of surgical accommodation. The five indoor surgeons had only thirty beds each, and no beds were available for the outdoor staff. There was only one large modern operating theatre and a small, ill-equipped one for out-patient surgery. With the rapid expansion of the surgical field, the daily operation waiting list became a source of anxiety and sometimes led to unpleasantness. Urgent requests by the surgeons and anxious appeals from their waiting patients had both to be refused for lack of available beds.

Owing to its central position in the city (with a population then considerably over half a million people) the Melbourne Hospital received the great majority of all accident, emergency, and police cases. These further curtailed the already very limited accommodation. In spite of this handicap much excellent surgical work was performed, and the standard of abdominal surgery thirty years ago was a high one. Among many operations of great interest I can personally recall a successful partial gastrectomy, successful sutures of perforated typhoid and duodenal ulceration, and successful removals of the spleen for splenic anaemia. The results of treatment of acute appendicitis by immediate operation would challenge comparison with those of most hospitals of the present day. With the exception of the skin clinic

there were no departments for the treatment of specialties at the hospital. Surgeons were expected to do general surgery, and its scope was extensive.

The unfortunate shortage of surgical beds, while chronic medical cases remained in hospital for prolonged periods, was responsible for considerable friction between the indoor and outdoor staffs. No vacancy on the indoor staff had occurred for many years, and men of great ability such as the late Mr. George Rennie and Mr. Langlands were forced to languish on the junior staff. Jealousy unhappily prevented any real co-operation, and the members of the out-patient staff were not called upon to act as assistant surgeons. Night emergency operations offered a little scope, but the roster for calling the surgical staff was a strict one, and had to be minutely adhered to by the house-surgeon on duty. Thrown back on their own resources the outdoor surgeons were compelled to do as much surgery as possible, under disadvantageous circumstances since the patients had to be sufficiently recovered to go home the same day, in the out-patient operating theatre. The distinction between minor and major surgery became somewhat elastic, and, in my opinion, the boundaries were often overstepped.

Chloroform was still extensively used as a general anaesthetic twenty-five to thirty years ago, and fatalities were not rare. Until 1909 no nurse had received any training in the management of an operating theatre and in the knowledge of large-scale sterilization, etc. This work had always been in the hands of the male surgical dressers, who were recruited from the ranks of the hospital orderly staff. At the head of these was Filmer, a man of great natural ability, who had been in charge of all the hospital instruments and operating theatre arrangements for many years. Generations of house-surgeons, medical students, and nurses owe a debt of gratitude to Filmer: he knew the foibles of every surgeon, and no emergency would find him unprepared.

The Work of Richard Stawell

At the time I refer to, the honorary staff of the hospital held a monopoly of the University clinical teaching in medicine and surgery. Students in attendance at the hospital paid special fees for this purpose, and although the standard of practice was high, the quality and the quantity of the teaching were very unequal and frequently caused much dissatisfaction. It was not until Dr. R. R. Stawell, now Sir Richard Stawell, and President-Elect of the British Medical Association, was appointed physician to out-patients in 1903 that teaching by the honorary staff of the hospital began to approach the quality of that given by London, Edinburgh, and provincial clinical hospital schools in Great Britain.

Before Dr. Stawell's appointment the medical student at the Melbourne Hospital was largely left to his own initiative to ferret out knowledge wherever and whenever possible. Although this lack of systematic teaching (sometimes derisively called spoon-feeding) may have developed self-reliance, and was probably to the advantage of the exceptional student, it left the humble rank and file deprived of adequate guidance, supervision, and stimulation. Familiarly known to his students as "Dicky," Dr. Stawell's devotion to the cause of improvement of medical teaching in Melbourne was supreme. It was one of his life's chief ambitions, and he spared neither time nor energy to further this object, which he rightly considered to be of such fundamental importance both for the hospital and for the community. Dr. Stawell was a born teacher of medicine, and it has been mainly due to his influence and example that clinical teaching in Melbourne has reached its present high level. To attend Dr. Stawell's clinics was the privilege of a lifetime. The scientific grounding received in the physical signs of the chest and in neurological diseases was one never to be forgotten. Although often smarting from some well-merited rebuke, the dull recipient ultimately came to regard this apparently austere clinician with feelings of real affection.

Coincident with Sir Richard Stawell's appearance on the out-patient staff, the Melbourne Hospital had the great

good fortune to elect direct to its indoor staff a physician of outstanding eminence in the person of Sir Henry Maudsley. With two such clinical teachers the student of medicine in those pre-war years had opportunities for acquiring knowledge in diagnosis and wisdom in treatment such as fall to the lot of few.

No memories of the Melbourne Hospital of thirty years ago would be complete without reference to the late Sir Harry Brookes Allen, the holder of the double University Chair of Anatomy and Pathology. To supplement and to round off his training in medicine the student was blessed with instruction by a brilliant pathologist. His post-mortem demonstrations in substance—for example, in syphilitic infections—often considerably in advance of his time, were models of what such demonstrations should be. He was ambidextrous; his knowledge was encyclopaedic; and he spared himself no labour to show in the pathological processes so ably displayed a striking lesson to the somewhat unwieldy crowd of students and graduates which always attended to hear him.

With such men as these to guide the students, it is little wonder that the Melbourne Hospital has given graduates to the world of which any medical school might be justly proud.

MEDICAL RESEARCH COUNCIL

REPORT FOR 1933-4

A leading article at page 424 mentions the principal aspects of the work carried out by the Medical Research Council¹ during the year which is reviewed in its report for 1933-4. In this article and a subsequent one the detailed researches described will be briefly set forth.

The equipment of the Institute has been improved by the removal of the last temporary buildings erected during the war, and a detriment to the amenities of the estate and the neighbourhood is now ended.

VIRUS DISEASES

The researches in infective pathology are still concerned largely with viruses and virus-like infective agents. There has been no epidemic of influenza, and so no opportunity for further experiment on its transmission from human beings to ferrets. In only one case was an inoculation of throat washing from a sporadic case of influenza successful. Apparently most of the sporadic cases described as influenza have a different cause, or the virus, if present in them, is of low infectivity. Further work has, however, been carried out on the virus already isolated during the epidemic of 1933. Many attempts at immunization have been made without success. The serum of a ferret which has recovered from infection contains antibodies which neutralize the infectivity of the virus *in vitro*, but these cannot be produced in the ferret by any means other than actual infection. Practically all the human subjects examined contained neutralizing antibodies in the blood, and it is proposed to test the population and see whether there is any change in the presence of an advancing epidemic. Attempts to cultivate the virus have not been successful, nor has it been possible to find any visible organism which will regularly produce a fatal pneumonia on the basis of a primary virus infection. Both human and swine influenza viruses have now been successfully transmitted to mice—an extremely important event, making it possible for every laboratory in the country to study influenza when it occurs.

The virus of vesicular stomatitis, unlike that of foot-and-mouth disease, will grow on the chorio-allantoic membrane of the chick, and so will the virus of louping-ill, but attempts to propagate the viruses of human disease

by artificial cultures have met with no success. Dr. Levinthal has continued his investigations on the organism of psittacosis, and has been able to cultivate it and carry it through fifteen subcultures. It has the characteristics of a definite micro-organism, only differing from bacteria in its minute size and in its dependence for propagation on the presence of living cells from a susceptible animal. Virus diseases of the central nervous system are also being studied, and the agent from a serious epidemic of poliomyelitis in St. Louis, U.S.A., has been successfully maintained in mice. Louping-ill has been transmitted to the monkey.

Dr. Andrewes and Dr. Elford have completed a research on the law governing the neutralization of the lytic activity of a bacteriophage by its specific antiserum. Apparently a given strength of the antibody neutralizes a constant proportion of the bacteriophage irrespective of the absolute amount added. This correlates with some work by Mr. Bruce White on cholera vibrio; he has shown that the rough variant has lost a specific haptene. These rough variants escape lysis by a specific bacteriophage, and may be recovered in culture.

Dr. Gye, Dr. Purdy, and Dr. Andrewes have continued their investigations into the infective tumours. The fibroma-like tumour discovered in a cottontail rabbit by Shope seems to be inflammatory rather than neoplastic. A papilloma also discovered by him in the same animal is under investigation. The infective units from Rous No. 1 fowl tumour seemed to be about 0.1 micron in diameter. The photodynamic inactivation of viruses has been further studied, although it has not been possible yet to produce an effective single-dose vaccine for dog distemper. Susceptibility to this treatment seems to have no relation to the state of organization of the different viruses. Enzymes, such as rennin and trypsin, and immune principles in true solution are highly susceptible, while lysozyme from tears is highly resistant. The "fixed" virus of rabies is readily susceptible, and when thus inactivated is a highly efficient immunizing antigen. Experiments with the "street" virus, obtained directly from the rabid dog, are in progress.

BACTERIA AND PROTOZOA

Dr. U. Friedemann, formerly of Berlin, has published a series of experiments on the conditions determining the accessibility of the brain and central nervous system generally to bacterial toxins and similar poisons (the blood-brain barrier).

The work of Dr. Gough and Dr. Burnet, on the constituent which provides the specific affinity of the bacteriophage for the organism, has shown that this is free from protein but generally contains phosphorus and nitrogen. Dr. Gough has separated the specific constituents of "old" tuberculin into two fractions, the first of which accounts for 90 per cent. of the activity, while the other is a proteose, small enough to pass through a membrane with 0.004 micron pores. A substance has been prepared from the urine of tuberculous patients which appears to be specific, but it is not yet certain whether its presence will serve to distinguish patients with active tuberculosis from those with latent or healed infections. Mr. Dobell has completed the sixth instalment of his investigation into the intestinal protozoa of monkeys and man. The trichomonads of macaques and human beings do not seem to differ from one another, and a number of unnecessary synonyms exist in the classifications. None of the strains seem to be pathogenic in themselves. The life-history of the non-pathogenic *Entamoeba coli* is being studied.

PHYSIOLOGICAL CHEMISTRY

The classification of nerve fibres into cholinergic and adrenergic, according to whether they transmit their effects by means of acetylcholine or a substance related to adrenaline, is already well known. The synapses in the ganglion have now been definitely identified as the site of release of acetylcholine, and the ganglion cells can be rendered insensitive to preganglionic impulses or

¹ London: H.M. Stationery Office. Cmd. 4796. (3s. net.)