

The Teaching of Pathology

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Abstract

A/Professor Chong Siew Meng relates the teaching of Pathology in the Medical School since 1905. The Pathology Department of the College of Medicine is closely associated with the Department of Pathology of the Government Medical Service. Pathologists in the Government Medical Service taught medical students till 1955 when the chair of Pathology was filled by Professor R Kirts. Undergraduates and postgraduate teaching and research in the department are described briefly. [The Editors]

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The teaching of Pathology began in 1905 with the founding of the King Edward VII College of Medicine. There was no Chair of Pathology and Dr GA Finlayson, the Government Pathologist, was appointed to head the department. This arrangement functioned satisfactorily and was continued even after the Chair of Pathology was created after the First World War.

The Pathology Department of the College of Medicine was therefore closely associated with the Department of Pathology of the Government Medical Service and both were housed in the same premises in the then Singapore General Hospital. Both departments were involved in routine clinical pathology, which in those early days consisted mainly of blood films for malarial parasites and routine examinations of faeces and urine. Routine bacteriological and serologic tests and vaccine preparation were also carried out. The number of teaching staff in the Department was small and teaching was carried on with the aid of the staff of the Government Department.

Dr Finlayson was succeeded in 1926 by Dr JC Tull, who was Government Pathologist until 1936. He was also the honorary physician to the Governor of Singapore. He in turn was succeeded by Dr JA Cowan, who held the position only until 1937. The next Government Pathologist was Dr HO Hopkins, who held the position from 1937 to 1941.

The Second World War saw the Japanese occupation of Singapore from 1942 to 1945. In the immediate postwar period, Dr RA Cumming (1946) and Dr HM Nevin (1947)

headed the Department for brief periods. Dr C Subramnanyam, the Government Pathologist from 1947 to 1954, then headed the Department until the establishment of the University of Malaya in Singapore in 1949, when the King Edward VII College of Medicine became the Faculty of Medicine of the University. From 1949 until 1955, Dr T Balasingam, Senior Lecturer in Pathology of the University, served as Head.

The Chair of Pathology in the University of Malaya was filled only in 1955 by the appointment of Professor R Kirk as Professor and Head of Department. The University Department was essentially a department of Anatomical Pathology (Histopathology), with emphasis on teaching and research. Professor Kirk was succeeded in 1960 by Professor K Shanmugaratnam, who before then had been the Government Pathologist. With Professor Shanmugaratnam's appointment to the Chair, and through his initiation, the department took on routine service diagnostic functions in Anatomical Pathology (Histopathology) for the General Hospital and the Kandang Kerbau Hospital for Women, albeit still with emphasis on teaching and research as a University academic department. In 1967, Professor Shanmugaratnam established, within the department, the Singapore Cancer Registry, an island-wide registry for cancer. Professor Shanmugaratnam retired as Head of the department in 1982, but remained as Professor in Pathology until 1986.

Professor Edward PC Tock assumed headship of the

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department in 1982, holding this position for 14 years until 1996. During his tenure as Head, the National University Hospital was commissioned for service as a public general and teaching hospital over the period 1985 to 1987. The department moved from the grounds of the Singapore General Hospital at Sepoy Lines to its present location at the National University Hospital, in 1985. Professor Tock retired as Head of the department in 1996. He was succeeded by Professor YS Lee, who headed the department from 1996 to 2000. Associate Professor SM Chong was Department Head from 2000 to 2004. The current Head is Associate Professor Teh Ming. Currently, apart from its functions in teaching and research, the department provides diagnostic service in Anatomical Pathology (Histopathology) and Cytopathology to the National University Hospital and Alexandra Hospital.

From 1925 to 1958, the department was based at the Singapore General Hospital, in a building that housed the Department of Pathology of the Government Medical Service, the Pathology Department of the College of Medicine and the Singapore Blood Transfusion Service. Lectures and practical classes for medical and dental students were also held in this building. In 1958, the Institute of Pathology at the Singapore General Hospital was jointly built by the University and the Ministry of Health, and the department moved into its premises, together with the Department of Pathology of the Ministry of Health. The University section of the building included a spacious lecture theatre used by all clinical departments. The Ministry of Health Department continued to occupy these premises after the University Department moved to the National University Hospital.

Undergraduate Teaching

Until the mid-1950s the course in Pathology was conducted in Year 4 (of a 6-year medical course) and the professional examination in the subject conducted at the end of that year. In the late 1950s, this examination in Pathology was replaced by an examination comprising equal sections of Pathology, Bacteriology and Parasitology. These subjects were taught and examined by their respective departments.

In the 1960s, the course in Pathology became spread out over Years 4 and 5 (and for some time even commenced in Year 3). The examination in Pathology was separated from that in Bacteriology and Parasitology and held at the end of Year 5. It now included questions in Forensic Medicine (a subject taught by part-time teachers) and Clinical Biochemistry (taught by the Department of Laboratory Medicine).

Medical students were given a conventional/traditional course in Pathology similar to those then adopted by many

medical schools in the UK. They attended courses of lectures and practical classes on the principles of pathology (one term) and systemic pathology (two terms). They were also attached in small groups to the department for a month each as part of their clinical postings. During this period, they participated in various departmental activities, including autopsies. Clinico-pathological conferences were introduced in 1960 and combined teaching sessions with other departments were introduced in 1965. Part-time lecturers taught the course in Forensic Medicine.

Since the 1990s, and in line with global trends and changing local demand, major changes have occurred in the medical curriculum. Initially, this involved redistributing the bulk of the teaching in general and systemic pathology to the second and third years of the five-year medical course. In the fourth year, students continued to be taught Chemical Pathology and Forensic Medicine. Late in their third year and continuing into the fourth year, students were also posted to the department for a clinical posting of three weeks. The final examination in Pathology was held at the end of the fourth year.

Following further curriculum review in the late 1990s, the hours of Pathology teaching were progressively reduced, as certain parts of the Pathology course became integrated with other disciplines and incorporated into the problem-based learning programme. Practical hours on microscopy were considerably curtailed as emphasis was changed to pathophysiology, instead of gross and microscopic appearances of specimens. The fourth-year posting was shortened to two weeks. The final examination in Pathology continued to be taken at the end of the fourth year.

Postgraduate Teaching

The Department has a tradition of encouraging junior academic staff to undertake research toward obtaining a Doctorate of Medicine or Doctorate of Philosophy. Several successful doctorates have been achieved. In addition, the department also trains junior staff in professional pathology practice to obtain the Membership of the Royal College of Pathologists of the United Kingdom or the Fellowship of the Royal College of Pathologists of Australasia. Over the years, many trainee staff members have acquired either or both of these qualifications.

Research

The department has a long and rich tradition of research, as evidenced by the publication of books and scientific papers in local, regional and international refereed journals. In the earlier years, research work was largely based on morphological (gross and microscopic) aspects of Pathology. Over the years, research facilities have been enhanced by the techniques of histochemistry and

immunohistochemistry, electron microscopy and quantitative morphometry. With the move to the National University Hospital, haematologists, chemical pathologists and molecular pathologists were also recruited to the department and their skills have greatly enriched the department.

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