

Leading Article

Tracing the Progress of Pathology in Sri Lanka – Part I Development of clinical pathology services

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In this series of articles comprising of three parts, an attempt is being made to document the birth and evolution of Pathology in Sri Lanka. In this, the first part, the development of clinical pathology services country wide will be addressed.

When tracing the evolution of Medicine, it is apparent that Internal Medicine and Surgery as the major disciplines, became easily recognized and established early unlike Pathology. One finds that much of Pathology was described and taught by clinicians. Before 1906 surgeons delivered lectures on surgical pathology and examined specimens removed at surgery at the London Hospital Medical School. Sir James Paget an eminent surgeon who described many pathological entities was known to have “held students captive with his lectures” at the Medical College of St Bartholomews’s Hospital (Barts) during this same period.

Professor Daphne Attygalle, president College of Pathologists of Sri Lanka 1985, in her Presidential address, attributed the origin of Pathology in this island to the establishment of the Colombo Medical School in 1870. It is ironic that the name of Dr Loos, the first Principle of this Medical School and a teacher of Physiology and the Practice of Medicine, was perpetuated by the award of a gold medal in Pathology at the 3rd MBBS examination. Professor Attygalle’s explanation of this anomaly is that he did indeed teach Pathology when he gave his lectures in the Practice of Medicine, based on the tenet “Pathology

bridges the gap between basic sciences and clinical medicine, so a proper understanding of pathological processes is vitally important for medical practice.” Her explanation is further supported by the fact that no mention is made of Pathology in the medical curriculum at that time even though all other basic sciences had been mentioned.

The next important piece of information documented with regard to the history of Pathology in Sri Lanka, is the appointment of Dr John Attygalle as Pathologist to the General Hospital Colombo, obtained from the Ceylon Administration report of 1899 prepared by Dr Alan Perry, the Principle Civil Medical officer.

Further information on the history of Pathology in Sri Lanka during this period is very meager until Sir Aldo Castellani became the first Professor of Pathology between the years 1903 – 1915. In his autobiography and in a personal communication from Lisbon whilst living in retirement in 1970, he wrote of the happiest years of his life as those spent in Sri Lanka describing the various capacities in which he functioned.

The ensuing period provides very little information apart from the words of Senior Consultants such as the late Dr E.M. Wijerama who refers to the subject of Pathology as being taught in the fourth year of the medical course by Dr. C. I. de Silva, the Medical Officer in charge of the anti- Tuberculosis Institute. He also refers to Dr Garvin Mack as one of the physicians who used to spend about ten

minutes in the laboratory after his ward round.

Kate Frankenthal in a book dealing with the story of Jews, intellectuals and socialists forced to flee their homeland, refers to Dr. Erich K. Wolf who was appointed as Pathologist to the General Hospital in 1934. He was also instrumental in organizing and maintaining a Pathology Museum. He carried out both these tasks until 1938 when he left to take up the post of City Microbiologist at the Bacteriological Institute, now the Medical Research Institute.

He was succeeded by Dr W.A.E Karunaratne as Pathologist in 1936, who was later appointed Professor of Pathology of the Colombo Medical School. Thus, Dr Karunaratne became the first Sri Lankan to hold the Chair in Pathology. At that time Professor Karunaratne, divided his work between the hospital, coordinating the laboratory services and academic work at the medical school. It was also significant that when the Colombo Medical School was granted University status in 1943, Professor Karunaratne was one of the three Professors holding office, the other two being in Medicine and Surgery, reiterating the important role of Pathology in the medical curriculum. Professor Karunaratne has been described as an affable and soft-spoken gentleman who often hesitated to pose a question to his students, fearing they may not know the answer! His monograph on Rhinosporidiosis is hailed as a classic.

Dr. G.S.W. De Saram succeeded Professor Karunaratne in the 1940s at the General Hospital and Dr. G.H. Cooray succeeded him in his post as Professor of Pathology. Subsequently Dr De Saram became the Professor of Forensic Pathology. Professor Cooray unlike his predecessor engaged in research into practically every organ of the body and was an exacting examiner who expected very precise answers from his students.

Dr De Saram was ably assisted in improving the Clinical Pathology services and in developing

the autopsy services by Dr Doyne Seneviratne who later succeeded him and left some years after to be in charge of Laboratory Services. For a brief period thereafter, no qualified pathologists were available and medical officers and consultants from allied fields were in charge of the laboratory.

Dr W. D. Rathnavale was appointed Pathologist, General Hospital, Colombo in 1954, and was later succeeded by Dr Doris Peiris who held the post till her retirement in 1983. Many innovative changes in the pathology services took place during this period. A full time qualified Clinical Biochemist/ Chemical Pathologist Dr. A.B.V. Perera and a Clinical Bacteriologist, Dr. Meena Mahendran were appointed to the General Hospital. Dr. H. R. Wickremasinghe was appointed as the Neuropathologist to General Hospital, Colombo.

Pathologists to provincial hospitals were then appointed with Dr. Jaimon becoming the first pathologist to be appointed to the Kandy Hospital in the 1940s and Dr. Doris Peiris the first qualified pathologist to serve the Galle Hospital.

In 1954, for the first time, Dr H.V.J. Fernando was appointed as a full-time pathologist to serve the Colombo Group of Hospitals (excluding General Hospital) which included the Children's Hospital, De Soysa Maternity Home, and the Castle Street Hospital for Women. Dr H.V.J. Fernando eventually was appointed the Professor of Forensic Pathology at the Colombo Medical School. Dr Priya Wijesinghe was appointed as the first full time pathologist to the De Soysa Maternity Home, Dr Watson to the Children's Hospital and Dr R. Parameshwaren to the Castle Street Hospital for Women. In 1965 Dr Bede Jayaweera was appointed to Cancer Institute, Maharagama and Dr. Raneer Perera to the Victoria Eye Hospital in 1971.

To keep pace with the ever increasing developments in Pathology it was necessary to branch out into the disciplines of Haematology, Chemical Pathology and

Microbiology. However, board certified Haematologists and Chemical Pathologists had to work as General Pathologists practicing all four disciplines of Pathology in the more peripheral laboratories, due to the prevailing shortage of specialists in these fields until the recent past. Hence disciplines of Haematology and Chemical Pathology took longer to develop.

Dr M.N. Premathileke was one of the first haematologists, to take up the post of Pathologist at General Hospital Kandy from 1964 to 1969. Subsequently she was reappointed to the same hospital as Head of Department of Pathology and Haematology from 1975 to 1987. The number of qualified haematologists greatly increased over the last few years and the discipline gained due recognition with the establishment of their very own College in 1998.

Dr Saroja Siriwardena the most Senior Chemical Pathologist in the country, remembers Dr. A. B. V. Perera as being the first Chemical Pathologist working at the General Hospital, Colombo from 1972 until his premature death in 1981. He was succeeded by Dr. Mrs. Natkunam, (Diploma in Histopathology) who was appointed Head of Biochemistry. Unfortunately, she migrated to Australia after the ethnic riots in 1983. Mr. Hemachandra Weerawarna joined as Medical Laboratory Technologist in 1972, becoming the Senior Medical Laboratory Technologist (SMLT) Biochemistry from 1980 –1985 and Biochemist thereafter. There was no Biochemist or Chemical Pathologist after this period until Dr Saroja Siriwardena became the first “home grown” chemical pathologist in Sri Lanka, passing her MD in April 1991. She was appointed to the General Hospital Colombo in 1995 after serving as Pathologist, General Hospital, Badulla.

In the meantime, transfusion services in the island also improved gradually. Blood transfusions were given to patients in the General Hospital Colombo for the first time in 1942 by Dr. Byron Joseph, Resident Physician to the hospital. This duty was performed by a succession of resident physicians for some

time with a blood bank functioning in a small way in the hospital premises. The National Blood Transfusion Services (NBTS) came into operation in 1982 and the Blood Bank, General Hospital Colombo was designated the Central Blood Bank. The NBTS became a decentralized unit under the Colombo Group of Hospitals in 1965 with Dr Percy E Goonewardena functioning as the first Superintendent. In 1968 it became a decentralized unit under the Director of Health Services.

A phased out system of Blood Bank development within the NBTS was started to cover the Provincial, Base and District Hospitals. The training of all medical and paramedical staff to man these units was carried out by the Central Blood Bank. The first unit to be opened under this scheme was in Galle in 1962. A blood bank was opened at the Accident Service in Colombo in 1969. After Dr Goonewardena's death Dr. M.G.S. Karunanayake was appointed as Superintendent of the NBTS for a short period and was succeeded by Dr. Nandrani De Zoysa as Director NBTS in 1980. Dr De Zoysa then developed many other ancillary facilities to include preparation of all blood components required by patients as well as the production of ABO grouping reagents, HLA typing and tissue cross matching, the latter a vital aspect of current transplantation services.

A Diploma and MD in Transfusion Medicine was conferred to successful candidates for the first time in 2001 and 2004. This was due to the valiant efforts of Dr Bindusara the Director National Blood Transfusion Services. Hence another subspecialty in Pathology was born. Currently a Specialty Board of Study in Transfusion Medicine is being formulated. Those qualified in Transfusion Medicine have now formed their own College – “College of Transfusion Physicians of Sri Lanka”.

Other ancillary pathology services such as immunohistochemistry and molecular biology were gradually developed in this country. The first immunohistochemistry laboratory was set up by Prof. N. Ratnatunge in the Department of Pathology, University of Peradeniya in 1991.

Currently there are 5 laboratories offering this service throughout the island. The laboratory handling the largest workload is the National Hospital Sri Lanka which caters to the needs of almost the entire island. Molecular laboratories too have been established in the Universities of Kelaniya and Colombo.

At present (2019) there are 82 qualified histopathologists, 50 haematologists and 15 chemical pathologists in the country. 59 of the 82 histopathologists are attached to the Ministry of Health, 02 serve in the Ministry of Defense while 21 are academic pathologists working in the universities of Sri Lanka providing a service component to the University Units of the teaching hospitals. A majority of the histopathologists, 31 out of 58 in the Ministry of Health deal with a workload of 1500 – 4500 samples annually whilst 22 histopathologists (22%) handle a workload of more than 4500 samples per year. They are distributed throughout the island. It is noteworthy that much of the northern and eastern provinces are manned by young Acting Consultants who have either completed or are awaiting their overseas training. Interestingly, in the discipline of chemical pathology one finds many more stations throughout the island outside the main teaching centers in the Western Province, being manned by chemical pathologists.

Two important events can be considered as the turning point in the progress of Pathology in Sri Lanka. The first was the establishment of the Institute of Postgraduate Medicine in 1974 and the second the College of Pathologists of Sri Lanka in 1975. These events will be discussed in greater detail in articles in the next volume of this Journal.

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