

HISTORY

The Indian Registry of Pathology (IRP) was established in 1965 under the auspices of the Indian Council of Medical Research (ICMR) in New Delhi, India as a Centre for collection and distribution of teaching material in pathology. The Registry was renamed in 1980 as the Institute of Pathology (IOP) in view of its expanded scope and activities. As per the need of the post-independence era when a large number of new medical colleges were coming up, IRP took up the initiative with the original aims and objectives of collection, classification, duplication and distribution of a representative spectrum of histopathological teaching material to several medical colleges, institutions, individual pathologists and clinicians. Further, the Registry provided a consultative machinery through the medium of consultative panels for different branches of special pathology alongwith the gradual development of a training center for pathologists, technicians, etc. The IRP also played a significant role in standardizing and propagating the technology of preservation and restoration of the natural colour to the gross specimens. Three sets of transparencies (number per set in parenthesis) have been produced, viz.: health delivery system– WHO, SEARO, New Delhi (576), TOMKIRP Rural Health Division– MOHFW (180) and Helen Keller Foundation set on Prevention of Blindness– WHO (160). Further, seven sets of transparencies are under preparation in collaboration with other institutes. These are Neuropathology- Tumors (Inst. Neurology/IP), Gastrointestinal Tract (AIIMS), Osteopathology (IP/CIO), ENT Disorders (SJH/IP), Leprosy- Histopathology (SJH/IP), Pediatric Surgery (SJH/IP) and normal human histology. So far, more than 150,000 transparencies have been sold by the Registry in the form of teaching sets. Efforts are being continued to produce more atlases in the specialized branches in pathology and it is envisaged to expand its activity beyond pathology to other medical and even non-medical (scientific fields). The Registry also undertook the task of preparing synchronized audio-visual teaching aids which are helpful for self-education by students, especially for professional colleges like medical colleges.

Also, original contributions of national importance have been made on many problems which are prevalent in the Indian subcontinent and where the pathogenesis of the disease was ill-understood. Special mention must be made of the contributions in the understanding of Indian Childhood Cirrhosis (ICC) and Non-Cirrhotic Portal Fibrosis (NCPF), neuropathology, osteopathology and pediatric pathology.

Hepatic pathology

- **Indian Childhood Cirrhosis (ICC)**

Certain apprehensions regarding ICC such as its invariable fatality have been dispelled by the systematic follow up of children suffering from this disease. Also, it was shown beyond doubt that Mallory hyaline which was generally thought to be pathognomonic was present only in about 50% of the cases and could be seen in many conditions other than ICC. Investigations on the role of Australia antigen in the causation of ICC revealed that the presence of Australia antigen was not high in the sera of patients

suffering from ICC thereby indicating that Australia antigen may not play a causative role in this condition.

- **Non-Cirrhotic Portal Fibrosis (NCPF)**

Morphometric studies have proved beyond doubt that this disease was characterized by relative dilatation of the portal veins at all stages. These observations are significant in as much as they help in a better understating of the hemodynamic patterns of the disease.

- **Hepatic changes in heat hyperpyrexia**

Liver biopsies from various pyrexial conditions were studied and similar changes were observed irrespective of the cause of hyperpyrexia indicating that fatty liver may be caused by high temperature. It brought another important point to light that Mallory hyaline change can occur in conditions other than ICC contrary to the view held earlier that Mallory hyaline was pathognomonic of ICC. Further, this study also helped in understanding the chronic hepatocellular damage caused by repeated episodes of high fever in conditions like recurrent malaria.

- **Cytosiderosis of liver**

An interesting finding of cytosiderosis of the liver was observed in some anaemic patients. As many as 22% of the patients showed moderate to marked degree of hemosiderin collection in the liver cells.

Neuropathology

A sustained study of several fields of neuropathology has been undertaken over the last ten years. The problems studied include cerebral oedema, Nagpur encephalopathy syndrome in children and experimental neuropathology.

Other studies

The Registry carried out original or basic biophysical studies on the topo-optical properties of glial fibres in comparison with other biofilaments. These studies have great utility in differentiating brain tumours. Similarly, detailed histochemical studies of muscle disease were undertaken.

Osteopathology

The most notable contribution is in the field of osteoporosis with particular reference to fracture neck of femur in the elderly and not-too-elderly persons. The 'parabolic index' which was evolved as a measure of osteoporosis has been verified to be a useful parameter, apart from tetracycline labeling.

Pediatric pathology

One of the most exhaustive autopsy studies of neonatal pathology that has been carried out in the country is at the Registry in collaboration with the Department of Pediatrics of Safdarjang hospital. The maternal and fetal causes of perinatal mortality have been worked out in detailed investigations and it was brought to light that birth trauma forms the leading cause of perinatal mortality, followed by congenital malformations and infections.

In the course of intensive R & D work based on appropriate technology, a large amount of scientific and technological work was conducted during the first ten years of the Indian Registry of Pathology of the ICMR, New Delhi. This enabled the application for seven patents relating to the mass production of colour transparencies at very low cost. The high quality of the teaching aids has not only gained universal acclaim within India, but by outside agencies like the WHO (Helen Keller Foundation), UNICEF, COSTED, NCERT, Mahatma Gandhi Leprosy Foundation, TOMKIRP (Translation Of Medical Knowledge Into Rural Practice), etc.

With a view to protect the interest of the ICMR and offer incentives to workers of the Institution, Dr. Sriramachari, who was primarily responsible for initiating and developing the technology, had obtained as early as 1975 seven patents in the name of ICMR. They are based upon his own or joint efforts with some of his young unskilled workers and colleagues whom he transformed into highly skilled workers. It is especially noteworthy that this methodology/technology developed in 1972 -75 still continues to enjoy a virtual monopoly in the field of not only medical and health learning materials, but also general and science education. The following is the list of patents:

1. Multipurpose stand for photography.
2. Apparatus for photomicrography
3. Optical printers
4. Method and apparatus for providing half-frame pictures
5. Film processing apparatus
6. Process for producing colour toned slides
7. Process for the production of processed film.
8. Control of glare through the microscope
(Submitted in 1994 & accepted in 2003).