

## Paediatric Surgery in Pakistan: Specialty Come of Age

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Traditionally general surgeons have been operating upon paediatric patients since surgery started. They used to call them, young adults. This misconception was later challenged, as research showed unique features both, anatomical as well as physiological, related to paediatric age group. Paediatric surgery as a separate discipline, got recognized in West shortly after second world war. It then grew rapidly and within decades and established itself in most of the technologically advanced countries. Paediatric surgeons are unique as they provide surgical care to varied age groups, from the fetal stage to adolescence. The surgical management of paediatric diseases has also progressed enormously during the recent times.

In Pakistan paediatric surgery started in early sixties. It was the time when other specialties of surgery were non-existent. It was in late 50s that couple of general surgeons showed preferential interest in surgery of children. A general surgeon Prof. Amanullah, the father of paediatric surgery in Pakistan, working at Jinnah Central Hospital Karachi went for training in Sweden. In 1962, a formal paediatric surgical ward was made part of School of Paediatrics, which was earlier established with the aid from UNICEF, in then Jinnah Central Hospital in Karachi. The Jinnah Hospital though a Federal Government Institution, was at that time still affiliated to the Dow Medical College. In 1972 paediatric hospital was transferred to a new building which was later named as The National Institute of Child Health (NICH).<sup>1</sup> In this building two new units of paediatric surgery were established. In the same decade Prof. Abdul Hamid started paediatric surgery in Nishter Hospital Multan and then after his transfer to King Edward Medical College, established the paediatric surgery in Mayo hospital Lahore. Gradually paediatric surgery departments were established in many other medical colleges including Military hospitals.

The formal training in paediatric surgery started in mid eighties. First university program of training for MS degree started by Karachi University and NICH was the center recognized for that purpose. The first MS degree was awarded to a female surgeon in 1988. Meanwhile a councilor of College of Physicians & Surgeons Pakistan (CPSP), who was a faculty member at NICH, persuaded CPSP administration to start fellowship program in paediatric surgery. The proposal was accepted and after inspection four departments in various cities were recognized for training in 1988. First fellow in paediatric surgery by examination, passed out in 1991. Since then more than hundred doctors have been awarded this fellowship.

Fellowship of CPSP in paediatric surgery is a 5 years structured training program. The induction is made after completing two years residency in general surgery. At present full accreditation is granted to seven institutes in Punjab, three in Sindh, two in NWFP and one in Islamabad. Many Medical Colleges have paediatric surgery wards but Pakistan Medical & Dental Council (PMDC) has not yet made it a mandatory discipline for accreditation of medical colleges.

The recent advances in technology have influenced the diagnosis and management of pediatric surgical diseases. This includes ante natal diagnosis and intervention (foetal surgery). Prenatal detection and serial ultrasonographic evaluation of anatomical malformations have resulted in an understanding of the natural history of many paediatric conditions. Foetal surgery programmes are now well established in few centers in western countries. FETENDO (foetal endoscopic surgery) and EXIT (ex utero intra partum) procedures and PLUG (plug the lung until it grows) are now technically possible. Paediatric surgeons participate in decisions about treatment and family counseling, along with obstetricians, and neonatologists. Since the awareness has increased more and more referrals are made by obstetrician and this has resulted in better understanding on the part of the family and has facilitated post natal management.

Neonatal surgery has undergone major development. Survival of patients with oesophageal atresia remained poor until the early 1960s, but now more than 90% survival has been reported from western countries. Increased survival is also reported from Pakistan as up to 70% operative salvage is reported from some centers.<sup>2</sup> This is related to better anaesthesia, advances in surgical technique, provision of elective ventilation and availability of peripheral parenteral nutrition. Single stage procedures are now increasingly performed in paediatric hospitals of the country for Hirschsprung's disease and anorectal malformations, where colostomy was routinely performed in the past. Laparoscopic surgery is now increasingly used as an armamentarium in paediatric surgical practices because of availability of miniaturized equipment. The routinely performed procedures are both diagnostic and therapeutic for conditions like undescended testis, disorders of sexual differentiation, persistent jaundice, recurrent abdominal pain, etc.<sup>3,4</sup> Minimally invasive thoracoscopic procedures are also becoming routine for various thoracic conditions.<sup>5</sup> Paediatric renal transplantation is another area that has advanced in favor of pediatric population as well. Improved outcome has

also been reported in the management of several solid malignant tumours including Wilms' tumour, hepatoblastoma, and rhabdomyosarcoma. More than 80% of patients with Wilms' tumour survive in the long term. It is because of establishment of surgical oncology team at some paediatric hospitals.

There is a great potential of research in the field of paediatric surgery. The understanding of surgical embryology is still in its infancy. More funds are needed to explore the foetal developmental processes. Advances in gene transfer technology may soon also make it possible to consider in utero gene therapy for certain fatal genetic diseases. One of the faculty members of Liaquat University of Medical & Health Sciences (LUMHS) has successfully obtained PhD in paediatric surgery from New Zealand, first in Pakistan. Following his return to Pakistan it is hoped that more basic research in relation to various congenital anomalies will start.

With great burden on general paediatric surgeons with ever increasing load of paediatric surgical diseases and variety of conditions they face, the sub specialties in the field of paediatric surgery are coming in fast. Major paediatric surgical departments have already established separate consultation clinics in disciplines like paediatric urology, paediatric plastic surgery, paediatric orthopaedics, paediatric neurosurgery, etc. It is hoped with this division the care for babies born with congenital defects and those suffering from acquired

disorders will improve tremendously.

Paediatric surgery must be incorporated in undergraduate medical curriculum and made an essential discipline in all medical schools. Establishment of small paediatric surgical centers at tehsil and district level through public / private partnership with provision of paediatric anesthesia services can go a long way in taking pediatric surgery to the grass root level as well. This will be of great benefit to the community.

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