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Pediatric surgery: A new surgical specialty in Nepal and its critical issues

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Abstract

Practice of pediatric surgery started in mid 14th century when both medicine and surgery, as a whole science were at its best primal stage. As there was little knowledge about resuscitation of children and their anesthesia, naïveté of visceral lesions and its operative technique, operative practice in pediatric population was limited to deal with some of congenital or acquired orthopedic diseases, removal of urinary bladder stones or some minor surgeries. Although, the history of pediatric surgery as a sub specialty is not that long.

Reported annual infant mortality is approximately 4.5 million worldwide, and 99% of it is contributed by developing countries. Recorded deaths of children below five years of age are around 10 million annually. According to Data published by National Population and Housing Census Nepal 2011 and Nepal Demographic and Health Survey (NDHS) 2011, Nepal is the 49th most populous country in world counting more than 26 million people, among them 34.6% is below 14 years of age which falls under pediatric age group. Besides, Infant mortality rate (IMR) is 46 per 1000 live births and Under 5 mortality rate (U5MR) is 39 per 1000 live births which is higher than some of south Asian countries. IMR and U5MR are gradually dilapidating in last few decades globally but developing countries with low income like Nepal, is still lagging and the rate is above the Sustainable Development Goal target at present. Nepal has very short history of modern health services where only in 1956 health ministry was established and control and prevention of communicable diseases was its main concern. Such high IMR and U5MR in Nepal are largely related with birth asphyxia, prematurity, sepsis and surgery related problems. In low and middle income developing countries Pediatric surgery is still a challenge, particularly in the emergency setup. The common surgical issues of children frequently faced in emergency are mostly trauma related and congenital abnormalities. Because of multifaceted and expensive treatment, lack of proper trained pediatric surgeons, lack of pediatric surgery setup like postoperative wards and NICU, the desired functional outcome is not easy to achieve in developing countries which is why the mortality rate in postoperative neonate is 6.4% in a developed country and is 62.2% in a developing country.

Figures of surgical procedure are globally very large. More than 2 billion people are expected to be beyond surgical care access. In countries with low or middle income, very little statistics on surgical conditions for pediatric populations are available. However one study done in African setup reveals 85% of children needs surgical consultation and treatment before they reach 15years. Our local study shows roughly seven hundred thousand children need surgical consultation in Nepal annually. Pediatric surgery as a subspecialty is recognized in 87.5 % of countries globally with 6.3 years mean duration of training. Those countries were barred which demands fully qualified general surgeon before doing pediatric surgery. Moreover, tissue engineering is also rising along with pediatric surgery as numerous tissue deficit diseases in pediatric surgical cases; treatment is being achieved through tissue engineering. Nepal, being low-income developing country encounters significant hurdle in delivering surgical care in pediatric population. Facility of postgraduate training for surgeons/ health care providers has not been available till date in whole country of 26 million populations. Currently, most of the pediatric surgical cases are taken up by general surgeons who have never trained in pediatric surgery program. Also, majority of them lack experience achieved by academic pediatric surgeon. On the contrary, advanced pathology, late presentation, minimal pediatric surgeons within the country, lack of proper trained pediatric surgeons outside the tertiary hospitals and inadequate governmental support are the challenges Nepal is facing now. With the help general and orthopedic surgeons we have managed so far though it is not their principal domain. Now is the time to off load burden of our fellow general and orthopedic surgeons by introducing pediatric surgery as subspecialty and take over. To improve pediatric health standard and to provide better surgical consultation to large pediatric population of Nepal, immediate establishment of postgraduate training opportunities within country and alliance with well-established pediatric surgical training centers/universities of developed countries is mandatory.

Biography

Dr Sushil Rijal, Chief Resident. I am currently pursuing my Masters in surgery degree in Pediatric surgery, at Mayo hospital under King Edward Medical University, (KEMU) Lahore, Pakistan. Also working as Tissue Engineer in Biomedical department of same university, KEMU. (involved in extraction of stem cells from Umbilical cord and applying to patients). I completed my MBBS from Kathmandu University Medical School, kathmandu Nepal.

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