



Review Article

SCOPE OF PEDIATRIC UROLOGY IN BANGLADESH

ALAM MS¹

Introduction:

The body takes nutrients from food and transforms them to energy. During this process waste products are left behind in the bowel and in the blood. The urinary system is the drainage system, which consists of organs kidneys, ureters, urinary bladder, urethra involved with the removal of wastes from the body. The urinary system keeps chemicals, such as potassium, sodium, and water in a physiologic normal balance, and removes the waste products of body metabolism from the blood. Children pass urine each day, depending on the fluids and foods consumed. Children are not just mini adults. They cannot always say what is bothering them. They cannot always answer medical questions, and are not always able to be patient and cooperative during a medical examination. Their urological care needs are very different. Urological conditions are the conditions affecting the organs of genitor-urinary system, which are more common in children and also a matter of concern. Besides some children may not be able to explain their problems while some may feel embarrassed to discuss with their parents. That's why selecting a pediatric urologist for children is so important.

Qualities of a pediatric urologist:

Pediatric urologists are trained to focus care on the special needs of children and their parents – even on potentially sensitive and embarrassing subjects related to genitalia and voiding problems. They know

how to examine and treat children in a way that makes them relaxed and cooperative. In addition, pediatric urologists often use equipment specially designed for children. This helps create a comfortable and non-threatening environment for your child.¹

Pediatric Urologists are experienced in handling small kids and can operate on these very soft and miniature tissues. They understand an unspoken language of the kids also and will be able to diagnose the problem in a young child better than an adult urologist who sees only adults. Also, the pediatric urological disorders are different from adult disorders and mainly involve birth defects, urinary infections and poor growth. Pediatric urologists are able to save whole lifetimes, and have the opportunity to follow their patients through a productive young life into adulthood. In addition, they work with various experts who are also oriented towards the next century.

Pediatric Urologists are trained surgeons who treat disorders of genitourinary system (Kidneys, ureter, bladder and reproductive system) in children upto the age of 18 years. Congenital problems of the kidney & genitalia are among the commonest problems occurring in children. Either they are Pediatric Surgeons who receive special training in Pediatric Urology or sometimes Adult Urologists who receive training in Pediatric Urology. Pediatric urologists are doctors who devote a minimum of 80% of their practices to the urologic problems of infants, children, and adolescents.

What Types of Managements Do Pediatric Urologists Offer?

Pediatric urologists are surgeons who can diagnose, treat, and manage children's urinary and

1. Prof Dr, Mohammed Shadrul Alam, Professor of Pediatric Surgery, Dhaka Medical College, Dhaka, Bangladesh

Correspondence to : Prof. Dr. Mohammed Shadrul Alam, 85, Nijum R/A (2nd Floor), Zigatola, Dhaka-1209, Bangladesh. e-mail: drshadrul@yahoo.ca; profdrshadrul@gmail.com, Cell : 88 01711364377

genital problems. Pediatric urologists generally provide the following services:¹

- Surgery for groin conditions in childhood and adolescence (undescended testes, hydrocele/hernia, varicocele).
- Evaluation and management of voiding disorders, vesicoureteral reflux, and urinary tract infections that require surgery
- Surgical reconstruction of the urinary tract (kidneys, ureters, and bladder) including genital abnormalities, hypospadias, and disorders of sex development
- Evaluation and surgical management of kidney stone disease
- Surgical management of tumors and malignancies of the kidney, bladder, and testis
- Evaluation and management of urological tract problems identified before birth
- Evaluation and management of urinary tract problems associated with neurological conditions such as spina bifida.

The scope of Pediatric Urology: An emerging superspeciality

Pediatric Urology is a new and rapidly expanding field. In this era, parents want their kids to be treated by the best specialist possible and so such a specialty is the need of the hour. And with so much of progress being made in equipment and medicines, it would be impossible for a surgeon to be aware of everything new and latest. Almost 40-50% of all surgical disorders in kids involve urinary or reproductive system. Pediatric Urology is an up-to-date, clinical situation that provides detailed descriptions of the best approaches for the functional, biological, and morphological aspects of the urinary tract before and after birth.

My Standpoint:

Pediatric urology has always been very close to my heart. I have keen interest in pediatric urology, endourology, and pediatric minimal invasive & Robotic urology. I am privileged to obtain an outstanding experience in pediatric urological works several times with Professor Paddy Dewan FRACS, an Australian pediatric urologist since 1993. I was

awarded WHO Fellowship training on Pediatric Urology with Prof. Dr Ramesh Babu, Pediatric Urologist, Sri Ramachandra Hospital Chennai, India in 2005. I also had undergone Post fellowship training in the department of Urology, Dhaka Medical College, Bangladesh. I have also participated in several Live Workshop on Pediatric Urology, in home and foreign.

I am most fortunate to accomplish my Fellowship on Pediatric Urology (6 Months) in the department of Pediatric Urology in Westchester Medical Center (University Hospital), New York Medical College, New York, USA in 2015. Many thanks to HPNSDP under DGHS, MOH&FW & World Bank for the arrangement of such pediatric urological fellowship programme in a good institute. I have presented my Pediatric Urological scientific papers in many scientific seminars in home & abroad. I am a member of the European Society for Pediatric Urology (ESPU), and the Society of Pediatric Urology (SPU). I am totally devoted in Pediatric Urology. My mission is to serve the Pediatric urological patients with adequate skill and dedication. It is one of my dreams to see the pediatric urology become established superspeciality in Bangladesh.

Bangladesh Scenario:

During 2018 Bangladesh population is projected to increased by 1,990,408 people and reach 167,857,715 in the beginning of 2019.² As we can see the Bangladesh population pyramid has an expanding type. This type of pyramid is common for developing countries with high birth and death rates. Relatively short life expectancy, as well as low level of education and poor health care.³ Bangladesh is a developing country where about 40-45% people are Pediatric age group. There are many patients with Pediatric urological problems. The concept of developing further super-specialization in this specialty was deliberated by the Association of Pediatric Surgeons of Bangladesh (APSB).

At present in Dhaka Shishu (Children) Hospital (DSH), there are 3 units, Unit-I; Pediatric surgery & burn & reconstructive unit; Unit-II: Pediatric Surgery & neonatology; Unit:III: Pediatric Surgery & urology. Almost all types of pediatric urological surgeries are performed in the department.⁴ In 2017 separate neonatal surgery unit, pediatric oncosurgery unit, and pediatric urology unit were opened in Dhaka and Chittagong Medical College Hospital. Many thanks

to secretary general of APSB Prof Dr Abdul Hanif Tablu & other EC members for their relentless efforts to open this superspeciality first time in public medical college. Moreover, in 2018 under Pediatric Surgery Department three superspeciality including Pediatric Urology unit are established in BSMMU with the persistent struggles of Prof. Dr. Ruhul Amin and his team.

Eligibility:

The mandate of the teaching institutions is: who would practice and how to educate and not about who should practice, as they have no regulatory control at present. It is globally accepted that pediatric practice has to be exclusive. Any mixing with adult practice produces unfavorable results in children.⁵ These observations explain why pediatric urology has completely moved to pediatric surgeons in some countries.⁶

There is an urgent need to bring about uniformity in training programs across the country. Sound academics is the backbone of quality output. The cutting-edge research in training programs is integral for achieving these goals. While measures for population control are, hopefully, gathering momentum by the efforts of health authorities, specialists in childcare should gear themselves for the task at hand. The sheer numbers provide us a challenge and an opportunity to innovate, refine, and simplify the management of complex malformations.⁷

The Pediatric urologists are enthusiastic, sincere, hard working, caring, passionate, loving person, who cares for their patients' more than personal luxury. Lucky people get opportunities, brave people create opportunities, but real winners are those who convert their problems in opportunities. Pediatric urologists are real winners as they are born to create opportunities from problems.⁸

Either urologists or pediatric surgeons subspecializing in pediatric urology:

The first question to be answered is, "Who can be easily and effectively trained at the least expense of resources". Since urologists are not exposed to the principles of pediatric care during their urology training, they have to learn the basics of pediatric care afresh. Consequently, the training will be prolonged with proportionate demand on economic resources. Contrary to this, nearly 10 to 30% of pediatric surgical training is already in pediatric

urology.⁹ Thus, pediatric surgeons are better exposed to urological problems of children than urologists are in the principles of pediatric care.¹⁰

A urologist trained in pediatric urology will, of course, augment his/her income by treating adults as well. Such mixing of adult and pediatric practice cannot be in the best interest of children as it adversely affects the outcome in the latter. This is more endurable because "pediatric skills" are maintained without getting diluted with adult practice. By training adult urologists in pediatric urology we are merely making an attempt to 'convert'. This will be a half-hearted attempt, entirely uncalled for when a refined and successfully working alternative is already available. In conclusion, we emphasize that pediatric urology is better left to pediatric surgeons who are already doing commendable work in this field.⁶

Training in Pediatric Urology: Institutional Challenges

An outstanding, dedicated, experienced, and well trained faculty of pediatric urology who enthusiastically embrace the ideal of educating and training the fellows. Advances have been made in many countries formalizing the training requirements for future specialists.¹¹ The mission of pediatric urology fellowship training is to perpetuate and nurture the highest quality education, and to provide technologically advanced, high quality patient care in all domains of pediatric urology, including general pediatric urology, endourology, incontinence & neurourology, minimal invasive pediatric urology.

Inguinal hernia is a common disorder of childhood that requires surgical repair at diagnosis. Circumcision, orchiopexy, and minor scrotal problems are routinely performed by surgeons / adult urologists, especially in non-academic settings. The challenge for expertise comes only from index cases, such as, posterior urethral valves, prune belly syndrome, bladder exstrophy / cloaca, proximal hypospadias, ureteric malformation / malfunction, and other complex disorders that clearly demand special skills and experience, which comes from sound training.¹² The majority of urological clinical problems in children are distinct and in many ways differ to those in adults. Complex and rare conditions that require special care with experienced doctors should be referred to

designated centres where paediatric urology practice has been fully established and a multidisciplinary approach is available.¹³

For quite some time, paediatric urology has informally developed, expanded, matured and established its diverse body of knowledge and expertise and may now be ready to distinguish itself from its parent specialties. Thus, paediatric urology has recently emerged in many countries as a distinct subspecialty of both urology and paediatric surgery, and presents a unique challenge in the sense that it covers a large area with many different schools of thought and a huge diversity in management. Knowledge gained by increasing experience, new technological advances and non-invasive diagnostic screening modalities has had a profound influence on treatment modalities in paediatric urology, a trend that is likely to continue in the years to come.¹³ One of the challenges of training surgeons to treat rare anomalies is the relatively small number of complex cases at most institutions.

The future gaining:

It is a well-known fact that by saving life of one child, we are adding at least 50 to 70 years of life.¹⁴ The smile on the face of these children is the biggest gift to the pediatric urologist. Management of various conditions by pediatric urologists have been challenged by outside specialties for focusing too much on surgical outcomes rather than benefits to the children.

The future of pediatric urology in private practice is in group practice.¹² We need to adopt the system from the developed countries and like-minded pediatric urologists will have to join hands and form teams. Additional advantage of group practice and operating as a team is that it decreases the stress, improves the quality of care and results of surgery.¹⁴

Conclusion:

At the completion of this fellowship, as a Pediatric Urologist of a developing country, his competencies should be covered in: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice, and How to utilize local available resources to get highest utilization in the field of pediatric urology.

Acknowledgement:

Many thanks and congratulations to

1. WHO – for awarded fellowship.
2. DGHS, MOH&FW & World Bank for the arrangement of such pediatric urological fellowship training programme in USA.
3. Prof. Dr. Shafiqul Hoque – My Mentor, Prof. Dr. Abdul Aziz, Prof. Dr. Ruhul Amin, Prof. Dr. Abdul Hanif Tablu, Prof. Dr. Ashraf Haq Kazal, Prof. Dr. Kaniz Hasina Sheuli – for established Pediatric Urology unit.

References:

1. What is a Pediatric Urologist? - HealthyChildren.org, Nov 21, 2015, Source American Academy of Pediatrics. www.healthychildren.org/English/family-life/health-management/pediatric-specialists/Pages/What-is-a-Pediatric-Urologist.aspx.
2. Demographics of Bangladesh – Wikipedia, en.wikipedia.org/wiki/Demographics_of_Bangladesh
3. Live Bangladesh population (2018). Current population of ... countrymeters.info/en/Bangladesh
4. Pediatric Urology | Dhaka Shishu Hospital. Urology Surgery Unit III. dhakashishuhospital.org.bd/index.php/pediatric-urology
5. Thomas DF, Kapila L. Children's surgery: A first class service. Report of the Paediatric Forum of the Royal College of Surgeons of England. May 2000.
6. Atish Kumar KV, Oak SN. Making of a pediatric urologist. *Indian J Urol* 2007;23:384-6.
7. M Bajpai. Pediatric urology: Development, eligibility, practice. Editorial Journal of Indian Association of Pediatric Surgeons, Vol. 14, No. 2, April-June, 2009, pp. 47-49. DOI: 10.4103/0971-9261.55150
8. Shyam Joshi. Pediatric urology: An emerging subspecialty. *Indian J Urol*. 2007 Oct-Dec; 23(4): 383. doi: 10.4103/0970-1591.36893
9. Gupta DK. MCh Training program in pediatric surgery in India: Recommendations of the

- curriculum committee. Indian Association of Pediatric Surgeons. 1998
- 10 V. Raveenthiran, Y. K. Sarin, and M. Bajpai. Pediatric urology in India. *Indian J Urol*. 2008 Jul-Sep; 24(3): 422–424. doi: 10.4103/0970-1591.42633.
- 11 Bloom DA. State-of-the Section Address: American Academy of Pediatrics, Section on Urology. The origin of a species: Pediatric urology. *J Urol* 2003;170:1488-92
- 12 Ricardo González. Frontiers in pediatric urology – specialty grand challenge. *Front. Pediatr.*, 22 July 2013 | <https://doi.org/10.3389/fped.2013.00015>
- 13 S. Tekgül , H.S. Dogan, E. Erdem (Guidelines Associate), P. Hoebeke, R. Koçcvara, J.M. Nijman, C. Radmayr, M.S. Silay, R. Stein, S. Undre. Guidelines on Paediatric Urology. European Society for Paediatric Urology & European Association of Urology 2015.
- 14 Shah R. The past, the present, and the future of pediatric surgery in India . *J Indian Assoc Pediatr Surg* [serial online] 2015 [cited 2018 Jul 4];20:2-7. Available from: <http://www.jiaps.com/text.asp?2015/20/1/2/145436>.