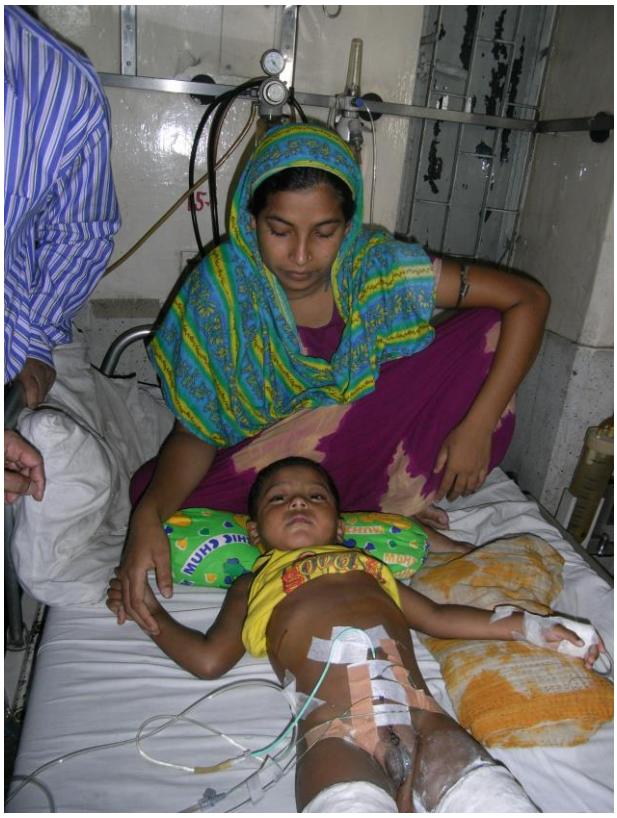
A report of a Bladder Exstrophy
and
Paediatric Urology Workshop

Bangladesh
May 26th - June 5th 2008



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Background

Paediatric Urology is an important, developing specialty in Bangladesh, significant because a large proportion of the over 150 Million people are children; in the order of 50%.

The problem of providing care to these children has changed, to some extent, as the specialty of Paediatric Surgery has developed following the establishment of Paediatric Institutions and the formation of the Paediatric Surgical Association of Bangladesh. The Kind cuts for Kids teams have been going to Bangladesh since 1993, but continue to have a role because of the enormity of the education task, particularly with the limited resources and the accumulation of previously untreated major anomalies in young adults. However, progress has been made, with the current visit focussed on the care of complex and redo cases of the anomaly of bladder exstrophy, rather than the more run-of-the-mill cases that formed part of the earlier visits.

Australasian assistance with the teaching of Paediatric Surgery and Urology began with a visit was funded by the International Federation of Surgical Colleges (IFSC). The one month training program was initiated by the executive of that organisation with the assistance of the then Secretary of the IFSC, Mr E Durham Smith from Australia, and Professor Golam Rasul from Bangladesh. In the earlier visits, teaching and surgery were conducted in both Dhaka and Chittagong, and involved the trainees of the newly initiated Masters course in Paediatric Surgery; further visits occurred in 1994, 1997 and 1998. The 1997 visit funded as a follow-up to the awarding of Dr Tahmina Banu (a Bengali Paediatric Surgeon) with the Royal Australasian College of Surgeons, 1996, Rohan Nicks Scholarship. Dr Kamal, from Sylhet, has since been awarded a similar scholarship for 1998 which took him to a trainee post in Perth. Both now work as Paediatric Surgeons in Bangladesh. The most recent visits were in 2000 and again in 2007, organised as an association between the Royal Australian College of Surgeons, through the International Committee, and the Association of Surgeons of Bangladesh, and the Bangladesh Urological Association.

The current visit followed an invitation from the Bangladesh Association of Paediatric Surgeons, who formulated a Paediatric Urological workshop primarily on the treatment of patients who had undergone, or were to undergo surgery for bladder exstrophy.

A luncheon was held on the afternoon of the last full working day. The photo shows some of the 25 surgeons and trainees who assisted in the surgery. Many more were involved in the workshop, including those who assisted with the care of the children in the wards.

The workshop was conducted in Dhaka at the **Bangobandhu Sheik Mujib Rahman University (BSMMU)**, the **Dhaka Medical College Hospital (DMCH)** and **the Dhaka Shishu (DSH).** The **Bangobandhu Sheik Mujib Rahman University** provides care for paediatric urology patients through both the Urology Service as well as the Department of Paediatric Surgery. The DMCH is a hospital with more than 1000 beds and many more patients than beds: the DSH is a dedicated Paediatric institution that is now headed by a Paediatric Surgeon.

Teaching Sessions

The Bladder Exstrophy Workshop was arranged through collaboration between the Bangladesh Association of Paediatric Surgeons and the three major hospital Paediatric Surgical Departments mentioned above. Lectures were given in each of these institutions, which facilitated a wide range of surgeons being involved and maximum use of the time available without overtaxing the resources of any one institution or group of surgeons.

During the 10 days of the visit, at least one lecture or tutorial was given each day, bar the public holiday Friday; on that day, as on every other, a ward round was conducted with the combined teaching and service focus.

	Lecture Title	*Date*	*Location*
1.	Bladder exstrophy - review	27th May	BSMMU
2.	Exstrophy surgery technique	28th May	BSMMU
3.	Vesicoureteric reflux	29th May	BSMMU
4.	COPUM	31st May	DSH
5.	Ureteroceles + Duplex	1st June	DMCH
6.	Hypospadias	2nd June	DMCH
7.	Complex case scenarios	2nd June	DMCH
8.	Neuropathic bladder	4th June	BSMMU

The lectures at Bangobandhu Sheik Mujib Medical University were conducted at 8.00 am in the 9th floor lecture theatre, with 20-30 Paediatric staff and trainees in attendance, most from Departments in Dhaka and others from institutions outside the capital. The three lectures at the Dhaka Medical College Hospital had a similar attendance, with much discussion at the end of each of the lectures.

The major part of the teaching occurred during the surgery, aided by a running commentary which was televised to the audience of up to 50 surgeons and trainees in each of the institutions. Points highlighted during the operative procedures included:

1. Major hypospadias – bladder mucosa
2. Urothelial lined augmentation
3. Continent urinary diversion
4. Pelvic osteotomies in exstrophy
5. Cosmetic bladder exstrophy
6. Catheterless ureteric reimplantation
7. Management of duplex kidneys
8. Posterior plication anoplasty
9. Redo anorectoplasty
10. Percutaneously ureterocele incision
11. “Jigsaw puzzle” decision making
12. Instrument care re cystoscopes
13. Instrument handling
14. Basic surgical skills
15. Catheter over a guide-wire insertion
16. Urethral dilation using a guide-wire

One feature of the Bangladeshi surgical environment is the lack of a scrub nurse, a role that is taken on by the more junior members of the surgical team, who have little or no training about the equipment used or the care of the equipment. However, all were willing to learn. The surgeons who scrubbed for surgery were:

1. Zahid Hossain, AKM
2. Shah Alam, Mahmudur Rahman
3. Saha, Nirupama
4. Ruhal Amin
5. Khastagir, Rajib
6. Mitul
7. Majumder, Nandan
8. Hoque, Shafiqul
9. Hanif, (Tablu) Abdul
10. Choudhury, Kamal
11. Zaman, Asad
12. Rajkarnikar, Ramana
13. Mahbub, Alam
14. Hoque, Mozammel
15. Hassan, Kamrul
16. Hasina, Kaniz
17. Borhan Uddin
18. Shahin Nur
19. Rahman, Mizan
20. Paul, Swapon
21. Kibria, Golam
22. Hossain, Shadat
23. Goutum
24. Asif, Azad
25. Abul, Kalam Azad

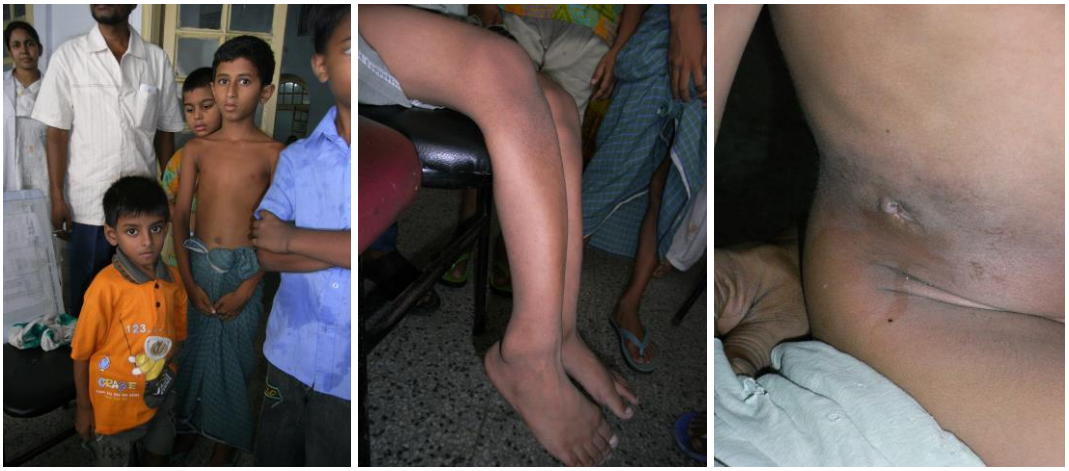
A boy with urethral obstruction is shown being treated at the Children's Hospital with the assistance from staff from DMCH and the Shishu Hospital. The care and use of the cystoscope was demonstrated, as were the new understanding of congenital urethral obstruction and techniques that improve the safety of urethral instrumentation.

Consultations

Bangladesh Paediatric Surgeons, Urologists and Gynaecologists, and the public, are eager to improve their understanding, and improve the care provided to children with Urological problems. Much progress has been made since the Kind Cuts for Kids Foundation teams made their first visit in 1993. The service of Paediatric Surgery was begun by Professor Masood, since when it has grown to have a Department in each major centre in Bangladesh. Paediatric Urology still has a way to develop, being fast tracked by the establishment of workshops such as the one organised for this visit. The topic of bladder exstrophy was the focus of the teaching, reflecting the complexity of the management of these children and the desire by those charged with the care of these patients to improve the outcomes. The importance of the subject of bladder exstrophy is highlighted by the numbers of cases seen: 71 bladder exstrophy patients were treated at BSMMU, from 1990 to 2008, and 12 cases were operated on in 2 years at the DMCH. During the workshop 24 exstrophy-complex patients were seen in the wards and clinics with bladder exstrophy related pathology. In all 46 patients were assessed, 11 females and 35 males with the following diagnoses:

Bladder exstrophy	21	Horseshoe kidney	1
Epispadias	2	PUJ Obstruction	1
Cloacal exstrophy	1	Hypospadias	4
Anorectal anomalies	2	Neuropathic bladder	1
Cloacal anomaly	1	Ureterocele with duplex	1
COPUM	4	Urethral duplication	2
Ectopic ureter	1	Vaginal atresia	2
Renal Stone	1	Traumatic Urethral stricture	1

The cases were selected by the staff of BSMMU, DMCH and DSH, most of which were presented during visits to each hospital the day before the workshop, others were seen during, before and after the theatre sessions.



A short little boy stands next to his same-age friends. His short stature is from bowed legs, growth failure and renal rickets due to renal failure secondary to congenital urethral obstruction (COPUM) requiring his ureters to drain via the skin (right).

Operative Surgery

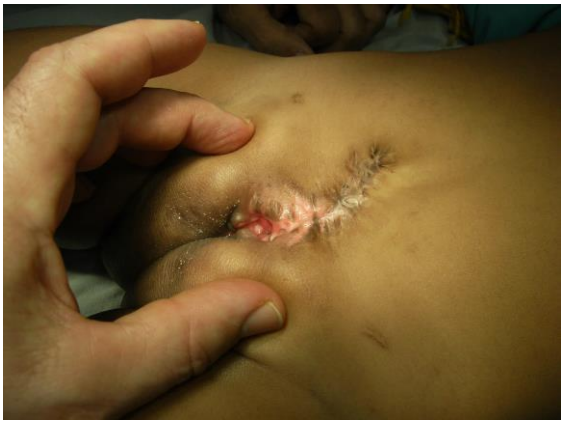
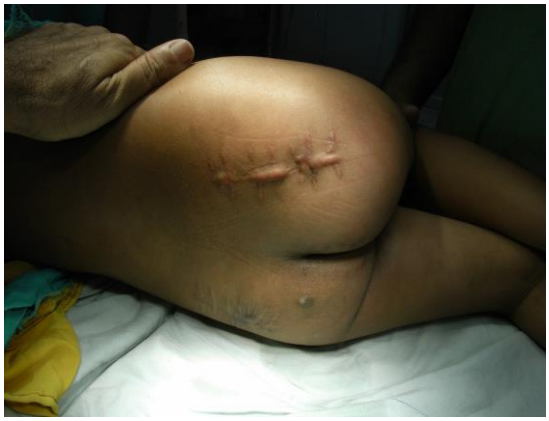
Seven days were made available for surgery, during which the procedures were both videotaped and telecast to an adjacent auditorium. The Anaesthetic and nursing staff were generous enough to work into the evening to enable a total of 15 patients (11 males and 4 females) to undergo their 84 procedures; most children had over 4 hours of surgery. Ten children had surgery for bladder exstrophy complex related pathology.

Bladder exstrophy closure	7		
Bladder neck plication	3	Epispadias repair	8
Anterior pubic osteotomies	16	Herniotomy	9
Posterior osteotomies	10	Clitoroplasty	1
Omphaloplasty	7	Antegrade cystoscopy	2
Wound revision	6	Cloacal repair	1
Perineoplasty	1	Cutaneous urethrostomy	1
Bladder polyp resection	1	Cystoscopy	3
Ureterocelectomy	1	Vaginoplasty	1
Ureteric reimplant – duplex	1	Vesicostomy closure	1
		Urethral dilatation	3

Tahsin was born with both the inner surface of the lower bowel and the bladder exposed. The external genitalia were so deformed that the child had not been recognised as a boy. The surgery he had closed the bladder, improved the appearance of his anatomy and enhanced his chance of faecal continence. His early recovery was uneventful and the discussion during his surgery was educational to the assisting and observing surgeons.

Operative Cases



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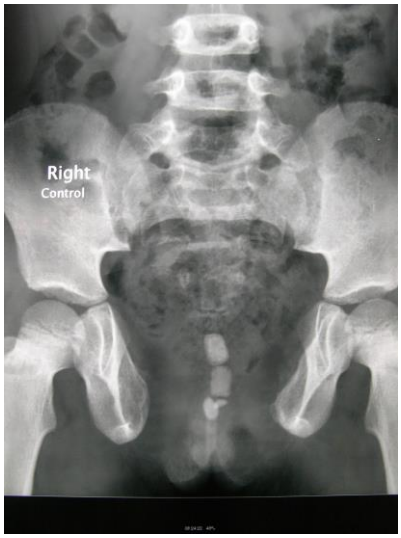
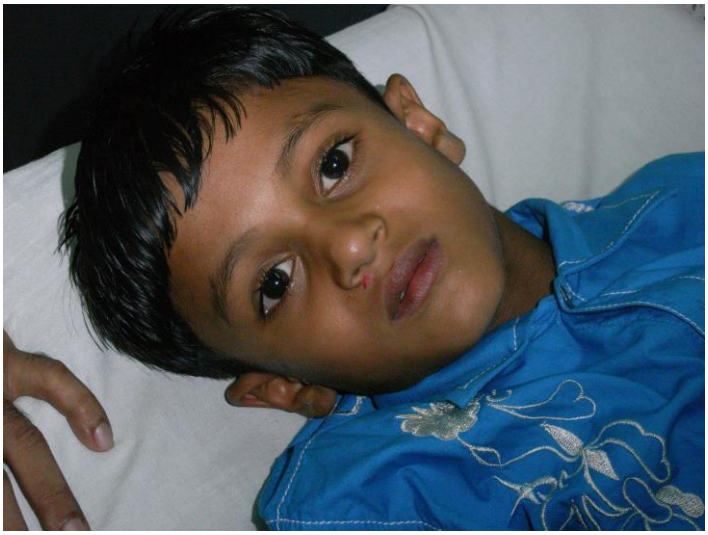
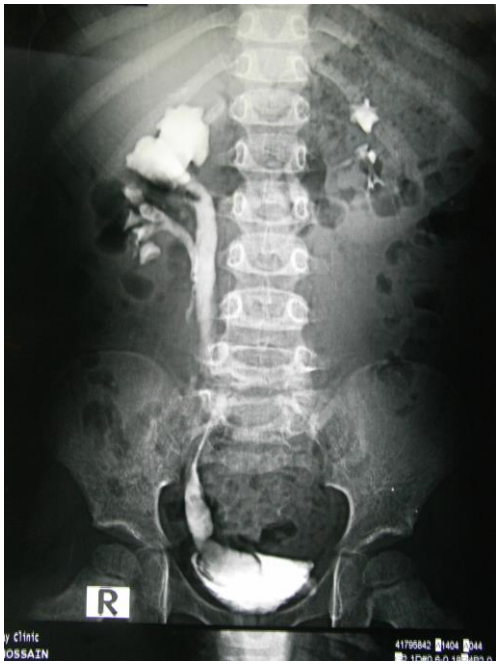
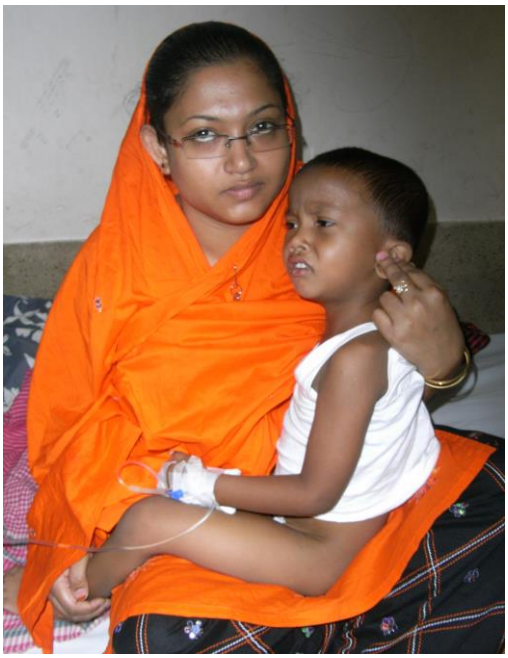




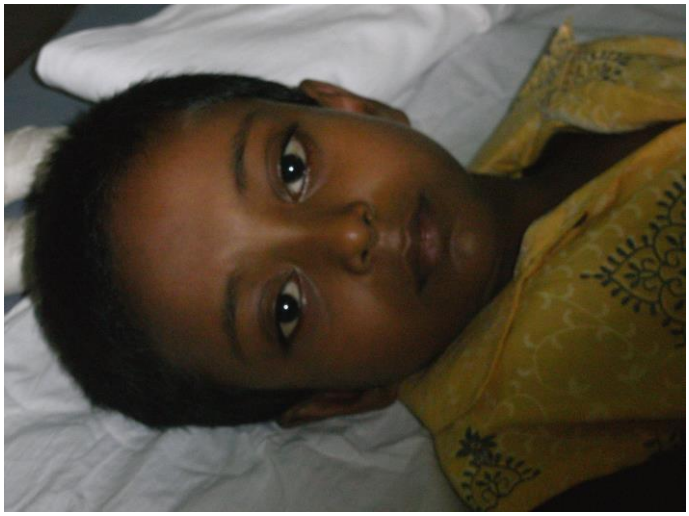
Sihab (top), Akhi (middle) and Sajid (lower) are three of the 24 children with bladder exstrophy and associated anomalies reviewed as part of the workshop. Sihab underwent a primary closure, Akhi needed a repeat of her pelvic osteotomies to seek a satisfactory functional and cosmetic outcome, and Sajid will require further surgery for the stones in his bladder after his previous surgery (bottom left).

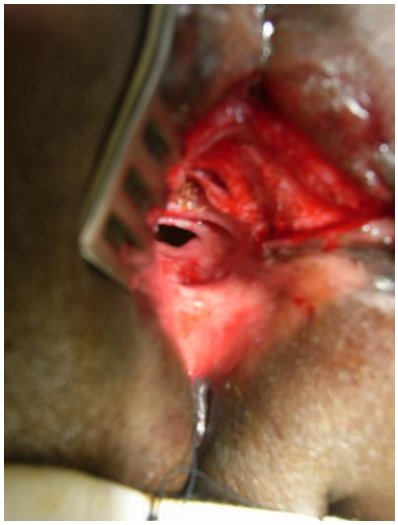




Rabiul presented with recurrent urinary tract infections and pain, which on investigation were found to be due to a double right kidney with reflux into the lower portion and obstruction of a ureterocele at the end of the ureter draining the upper pole of his right kidney. In relieving the obstruction and curing the reflux the boy did not have any catheters left in his bladder and was able to leave the hospital, voiding normal urine, the following day.

While not a core part of the workshop this case was considered a major additional contribution to potential changes in Bangladeshi Paediatric Urology practice.



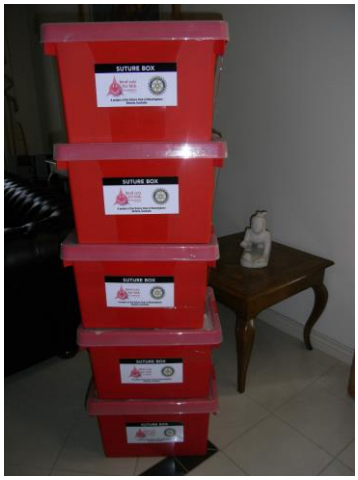


Shoiti, an 8 year girl, had been incontinent all her life because of an abnormality similar to that of the anatomy of a female chicken. The operative photo shows the common opening of the vagina and urethra, which was repaired by creating a new urethra.

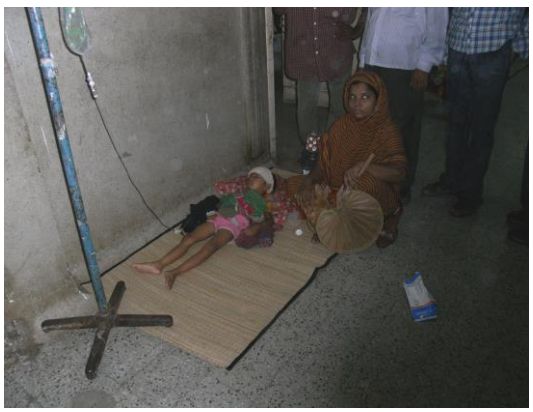
The Sponsors

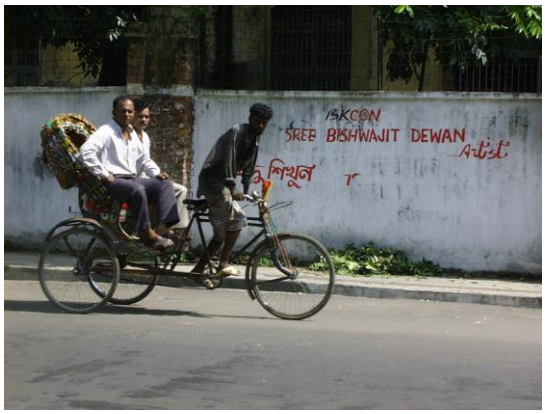
In the past the Paediatric Surgical visits were supported by generous donations from ROMAC, and the Eltham Rotary Club, Ansell International (gloves), Kendall Sherwood Davis and Geck, Bard Urological, and support from Elizabeth and Russell Brown. On this occasion the funding for the trip was provided by Dr Younus and his family, Icepta Pharmaceutical company of Bangladesh, the Ansell, Bard Urological, Unomedical, Johnson and Johnson companies, Tyco and the Manninham Rotary Suture Box project.

During this visit to Bangladesh the Kind Cuts for Kids Foundation, in conjunction with the Manningham Rotary Club, saw the initiation of the ***Suture Box*** program, with five boxes containing enough equipment each for 5 children to undergo surgery either during or after the Australian team visit. The Kid Cuts for Kids Foundation also donated a Denis Brown ring retractor to the BSMMU hospital.



The Suture Boxes are seen stacked ready for departure from Melbourne and the last of the donations shown being handed over to Prof. Shafiqul Hoque after the last of the surgery.





Bangladesh is an amazing place. Although confronting, awful, sad, poor, noisy and dirty apply to parts of what you experience, there is much to admire – particularly the people. Finding your surname on a wall in Dhaka (when you have an Irish background), and seeing patients with an IV line being cared for on the corridor floor, add to huge impact of Bangladesh on the visitor.