# Paediatric Surgical Visit to Bangladesh

**RACS Rowan Nicks Scholarship Follow-up Study**

***September 1997***

**PA Dewan**
MD MS BMedSc FRACS

## *Introduction*

Paediatric Surgical teaching in Bangladesh is relatively new, but now well established. A visiting Professor was requested by the Bangladesh Society of Surgeons and, subsequently, a visit was supported by the International Federation of Surgical Colleges in March 1993. A follow-up visit occurred in early 1994, which lead to the application for, and securing of, a Royal Australasian College of Surgeons, Rowan Nicks Fellowship by Associate Professor Tahmina Banu. The Rowan Nicks Committee decided to support a further visit, aimed to further the teaching of Paediatric Surgery and to review the outcome of the 1995 Fellowship, for the country and speciality.

The two week visit was productive, the teaching opportunities extensive and developments since 1993 have been significant; it would appear that the funds of the Rowan Nicks Committee were well spent in 1995 and have been for this visit. A background of the structure of Paediatric Surgery in Bangladesh will be given to assist with the interpretation of this report.

## *Paediatric Surgery in Bangladesh*

### *National*

Paediatric Surgical teaching commenced in Dhaka, with the establishment of an MS course based in the Dhaka Shishu Hospital, with teaching conducted in the Dhaka Medical College Hospital and the Institute for Postgraduate Medical Research. The founders of the teaching program are dedicated to an improvement in the care of Paediatric Surgical standards, but were not trained by Paediatric Surgeons. Associate Professor Tahmina Banu is one of the early graduates from the MS course.

As yet, not all of the medical schools have a Paediatric Surgeon appointed to their teaching hospitals and Paediatric Surgery has little input into the student curriculum in the few universities that have a Speciality Unit. This is despite the high proportion of children in the community.

### *Chittagong*

Chittagong is a city of approximately 3 million people with two institutions offering Paediatric Surgical service and teaching. The Department of Paediatric Surgery at the Chittagong Medical College Hospital has two senior posts and a number of junior positions. The Professorial position is currently unfilled and the head of the unit is Associate Professor Tahmina Banu. The second consultant is Assistant Professor Pannalal Saha and the junior staff includes registrar trainees and residents.

The Paediatric Surgery Unit at the Chittagong Hospital Medical Centre was initially established by Associate Professor Shafiqul Hogue, who now works in Dhaka

Medical College Hospital. The unit now has its own ward and operating theatre. However, the ward has 35 beds (officially 15), but often has more patients than beds, with significant limitations because of a shortage of nursing staff (one per shift), poor availability of washing facilities in the ward, and the need to purchase all disposables from an outside supplier (by the parents).

The second Paediatric Surgical Unit is located in a private, non-profit institute in the suburb of Agrabad - the Woman's and Children's Hospital. The theatre facilities and junior staff arrangements are limited, but large numbers of patients attend the hospital, which is yet to secure the services of a full-time surgeon. Both institutions seem important in the development of services to children in the region.

The subsequent details are of the patients treated, their diseases, the teaching sessions conducted and the recent improvements in the Chittagong Medical College Hospital, Department of Paediatric Surgery.

## *Teaching Sessions*

*Lectures*

The first 11 lectures were conducted in the Paediatric Surgery seminar room in the presence of the resident, registrar and various medical, surgical and radiology consultation staff of the Chittagong Medical College Hospital. Two further lectures were presented as a guest speaker as part of symposia on specific topics, the first of which was attended by 75-100 Chittagong Medical Staff, Professor Masood (father of Bangladesh Paediatric Surgery) and many senior Chittagong College Hospital medical staff. The final two lectures were in a combined session held at the Dhaka Medical College Hospital on the last day of the visit.

| | | |
|---|---|---|
| 1. | Hypospadias | 1.9.97 |
| 2. | Bladder Exstrophy | 2.9.97 |
| 3. | Bladder Outlet Obstruction | 3.9.79 |
| 4. | Urogenital Endoscopy | 4.9.97 |
| 5. | Nuclear Medicine in Paediatric Urology | 4.9.97 |
| 6. | Neurogenic Bladder and Augmentation | 5.9.97 |
| 7. | Wilms Tumour | 6.9.97 |
| 8. | Undescended Testes | 7.9.97 |
| 9. | Acute Scrotum | 8.9.97 |
| 10. | Female Genitoplasty | 9.9.97 |
| 11. | Hydronephrosis | 6.9.97 |
| 12. | Acute Scrotum | 10.9.97 |
| 13. | Vesicoureteric Reflux | 11.9.97 |
| 14. | Urinary Tract Obstruction | 12.9.97 |
| 15. | Vesicoureteric Reflux | 12.9.97 |

## *Tutorials*

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|---|---|---|
| 1. | Radiology/pyeloplasty | 1.09.1997 |
| 2. | Neurogenic bladder | 5.09.1997 |
| 3. | Cloaca/Wilm's | 5.09.1997 |
| 4. | Urinary Catheter Management | 10.09.1997 |

## *Ward Rounds*

A teaching/working ward round was conducted on 13 occasions at the Chittagong Medical College Hospital. The participants included MS (Paediatric Surgery) students from Dhaka, in addition to the ward staff for the Paediatric Surgery Staff. A similar ward round was conducted on one occasion at the Chittagong Shishu Hospital and the Dhaka Medical College Hospital.

## *Inpatients, Outpatients and Case Discussion*

Between ward rounds, lectures in the ward tutorial room and the operating sessions, several patients were seen for consultation with senior members of the Surgical staff. Some children had been operated on during previous visits, but most were new patients.

### ***Chittagong Medical College Hospital***

| | Diagnosis | Date 1st Seen |
|---|---|---|
| 1. | Ascariasis | 31.08.1997 |
| 2. | Hernia - inguinal | 31.08.1997 |
| 3. | Hirschsprung's | 31.08.1997 |
| 4. | Hydronephrosis - bilateral | 31.08.1997 |
| 5. | Hydronephrosis - megaureter | 31.08.1997 |
| 6. | Hydronephrosis - ureterocele | 31.08.1997 |
| 7. | Hypospadias | 31.08.1997 |
| 8. | Hypospadias - first stage DS | 31.08.1997 |
| 9. | Hypospadias - Pedicle patch repair | 31.08.1997 |
| 10. | Hypospadias - post circ | 31.08.1997 |
| 11. | Hypospadias - post first stage | 31.08.1997 |
| 12. | Intersex - Mixed gonad dysgenesis | 31.08.1997 |
| 13. | Spina Bifida | 31.08.1997 |
| 14. | TB abdomen | 31.08.1997 |
| 15. | Adhesive bowel obstruction | 1.09.1997 |
| 16. | Burkitt's lymphoma | 1.09.1997 |
| 17. | COPUM - vesicostomy 1.09.1997 | |
| 18. | Crossed fused renal ectopia | 1.09.1997 |
| 19. | Ectopia vesicae - failed close | 1.09.1997 |
| 20. | High anorectal anomaly | 1.09.1997 |
| 21. | Intersex - adult male | 1.09.1997 |
| 22. | Perineal injury - incontinent | 1.09.1997 |
| 23. | Hydronephrosis | 2.09.1997 |
| 24. | Hydronephrosis | 2.09.1997 |
| 25. | Sacral agenesis | 2.09.1997 |
| 26. | Post op bladder mucosal graft | 3.09.1997 |

## *Chittagong Medical College Hospital (Cont'd)*

| Diagnosis | Date 1st Seen |
|---|---|
| 27. Vesicoureteric reflux | 3.09.1997 |
| 28. Abdominal mass - ? hydronephrosis | 3.09.1997 |
| 29. Sacral agenesis. - neurogenic | 4.09.1997 |
| 30. Trauma - perineal fusion | 4.09.1997 |
| 31. Cloacal variant | 5.09.1997 |
| 32. COPUM - renal failure | 5.09.1997 |
| 33. Neurogenic bladder | 5.09.1997 |
| 34. Urinary incontinence | 5.09.1997 |
| 35. Intersex - post op. | 5.09.1997 |
| 36. Old # radius, ulnar | 5.09.1997 |
| 37. Acute abdomen | 7.09.1997 |
| 38. Hydronephrosis | 7.09.1997 |
| 39. Hypospadias minor | 7.09.1997 |
| 40. Megacystis, prune belly | 7.09.1997 |
| 41. Acute abdomen - ? appendix mass | 8.09.1997 |
| 42. Acute abdomen - Ascariasis | 8.09.1997 |
| 43. Hydronephrosis with nephrostomy | 8.09.1997 |
| 44. Neurogenic bladder - Spina Bifida | 8.09.1997 |
| 45. COPUM - bladder dysfunction | 9.09.1997 |
| 46. Vesicoureteric Reflux - bilateral | 9.09.1997 |
| 47. Hypospadias | 10.09.1997 |
| 48. Inguinal Hernia | 10.09.1997 |
| 49. Round Worm, Small Bowel obstruction | 10.09.1997 |
| 50. Epispadias | 11.09.1997 |
| 51. Heminephrectomy- duplex L | 11.09.1997 |
| 52. COPUM | 11.09.1997 |

## *Chittagong Shishu Hospital*

| | |
|---|---|
| 53. Balanitis and Retention | 11.09.1997 |
| 54. COPUM | 11.09.1997 |
| 55. Enuresis | 11.09.1997 |

## *Dhaka Medical College Hospital*

| | |
|---|---|
| 56. Bladder exstrophy | 12.09.1997 |
| 57. Cloacal anomaly | 12.09.1997 |
| 58. PUJ obstruction | 12.09.1997 |

## *Operations*

The following is a list of the 25 operations on 22 patients, conducted over 46 hours of operating time. Much of the time operating was spent teaching the junior trainees and residents the operation-related topic. Operative technique and basic surgical principles was also extensivley discussed.

| ***Diagnosis*** | ***Operation*** | ***Date*** |
|---|---|---|
| 1. Anorectal anomaly - fistula | Colostomy | 1.09.1997 |
| 2. Hypospadias | First stage DS repair | 1.09.1997 |
| 3. Hypospadias | Pedicle patch procedure | 1.09.1997 |
| 4. Bladder Exstrophy | Closure of bladder exstrophy | 2.09.1997 |
| 5. Bladder Exstrophy | Posterior osteotomies | 2.09.1997 |
| 6. Hypospadias | Bladder mucosal graft | 3.09.1997 |
| 7. PUJ obstruction | Pyeloplasty - L | 3.09.1997 |
| 8. Hypospadias | Pedicle Patch procedure | 4.09.1997 |
| 9. Neurogenic bladder | Urodynamics | 4.09.1997 |
| 10. PUJ obstruction | Pyeloplasty - L | 5.09.1997 |
| 11. Hypospadias | Second stage DS repair | 7.09.1997 |
| 12. Perineal fusion | Urethroplasty, vaginoplasty - abdo/peri | 7.09.1997 |
| 13. TB abdomen | Laparotomy | 7.09.1997 |
| 14. Megaureter | Ureteric reimplant | 8.09.1997 |
| 15. PUJ obstruction | Pyeloplasty - L | 8.09.1997 |
| 16. PUJ obstruction | Pyeloplasty - R redo | 8.09.1997 |
| 17. Ureterocele | Ureteric reimplant - single system | 8.09.1997 |
| 18. Hypospadias | Urethral advancement - 2nd stage | 9.09.1997 |
| 19. Mixed Gonadal Dysgenesis | Chordee release | 9.09.1997 |
| 20. Mixed Gonadal Dysgenesis | Laparotomy, herniotomies, gonadectomy | 9.09.1997 |
| 21. Inguinal Hernia | Herniotomy | 10.09.1997 |
| 22. Inguinal Hernia | Herniotomy | 10.09.1997 |
| 23. PUJ obstruction | Pyeloplasty R redo | 10.09.1997 |
| 24. Round Worm obstruction | Laparotomy - enterotomy | 10.09.1997 |
| 25. Urethro-vaginal fistula | Urethral repair | 11.09.1997 |

Operating theatre deficiencies included a lack of Paediatric instruments, the drapes were in a state of disrepair, the gloves were rewashed and resterilised, the diathermy handle was reused (sterilised only by wiping with betadine), sutures and catheters were supplied, almost exclusively, from the local market (by the parents) and gas supplies for anaesthesia were limited. There is only one nurse for the theatre, therefore the scrub-nurse position is filled by one of the junior medical staff. Most unfortunately, no cidex was available for the use of the available cystoscope.

## *Rotary Meetings*

Four Rotary Club meetings were attended, two of which were as a guest speaker, during which plans were formulated for the collection and distribution of recycled and discarded (but reusable) materials from Australia.

## *Advances contributed to by the 1995 Rowan Nicks Scholarship*

The following could reasonably be considered, at least in part, due to the awarding of the 1995 Rowan Nicks Fellowship to Associate Professor Tahmina Banu:

1. Establishment of Day Surgery case management.
2. Seeking and securing a Paediatric cystoscope.
3. Seeking and securing a Denis-Brown ring retractor.
4. The use of a Hypospadias proforma for admissions.
5. The use of an Anorectal Anomaly admission proforma.
6. Department meetings and audit process.

## *Advances contributed from previous Paediatric Surgical Visits*

It is impossible to be certain of any direct benefit of a short period of teaching, but it would appear that the increased number of cases identified and changes in the usual practice in theatre would suggest there has been the following benefit from previous visits:

1. Increased use of subcuticular suture closure of Children's wounds

2. Improved awareness, diagnosis and understanding of:
    a. Pelviureteric junction obstruction.
    b. Congenital urethral obstruction.
    c. Neurogenic bladder.

## *Considerations for the future*

Further visits to assist with the teaching of Paediatric Surgery would be of great assistance to the development of the specialty. Specific areas of activity which would be most productive would be :

1. Assistance with the establishment of a Student curriculum for use in each of the universities.
2. Securing overseas training posts for senior Paediatric Surgical trainees.
3. Funding of a study of the incidence of renal anomalies.
4. Providing education in resource management.
5. Assisting with and encouraging co-ordination of Paediatric Surgical activities through the Association of Paediatric Surgeons of Bangladesh and the Society of Surgeons of Bangladesh.