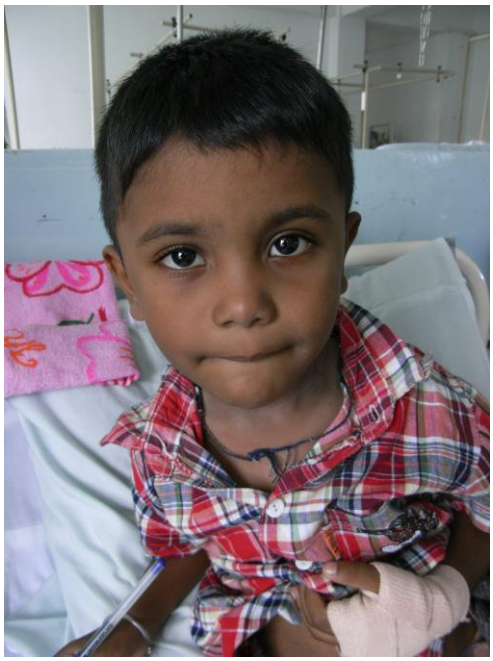
Mauritius

Paediatric Service Training
for
Urology/Surgery, Nursing and Anaesthesia

13th – 26th November 2007



Professor Paddy Dewan, Dr Justine McCarthy and Rn Rose Wilson

A project of the Mauritius Department of Health and Quality of Life,
The Society for Children Inoperable in Mauritius,
And the Kind Cuts for Kids Foundation

kind cuts for kids foundation AUSTRALIA

Overview

There have now been eight visits to Mauritius to help with the development of services for children with surgical problems. On this occasion, 138 consultations were conducted for a total of 121 patients, starting with a clinic of 91 patients on the first day. Sixty-six operations were performed during 35 anaesthetics on 33 patients, with a greater proportion of major operations than on previous visits; bringing the total number of operations conducted since 2001 to 412, during 293 anaesthetics on 196 operative patients. The difference between the number of patients and the number of anaesthetics is because of patients requiring more than one procedure for major anomalies, particularly the more than 75 patients with an abnormality of their lower bowel, including Hirschsprung's disease and imperforate anus.

Importantly, Dr Hosany Nazeer, who came to Australia for training during 2006-07, was part of the team and the senior Surgeon Dr Anwar Fakim continued his role as part of the Mauritian coordination team. Added to the surgeons involved in the development of the service were Dr Naresh Burton and Dr Steven Ng from the Flacq hospital. Strategic planning is coming to the fore, and it is now anticipated that there will be two centres to develop a "whole of the island" approach to Paediatric Surgical care.

The junior medical staff, the theatre and ward nurses, the ward clerks, the radiologists and radiographers, and the Anaesthetic staff performed magnificently to enable over 100 hours of surgery to be carried out in the two week period.

Again, it was noticed that there have been advances in the service to children with surgical disease in Mauritius; the patients are now younger and are less likely to have had complications of previous surgery. Also, there has been an increase in the teaching component with a lecture given by Dr Justine McCarthy (the team Anaesthetist). Unfortunately, there are still patients who are presenting with failing kidneys because of bladder problems about which there needs to be ongoing education to families and the medical community.

Great advances have been made, but there are still changes needed. Instruments in theatre, theatre processes, radiology protocols and community awareness of bladder and renal disease need to be improved, and there needs to be realization of the desired country-wide approach to the services for children. To assist with these further developments, discussions were had with the Minister, the Chief Medical Officer and other staff of the Department of Health & Quality of Life, with the prospect of ongoing involvement in the planning process.

In addition to the support from the Ministry and the Hospital staff, support was provided by SACIM Mauritius, and the Australian High Commissioner and her staff. The Mauritian media also provided support, thus further informing the community of the service now available in Mauritius.

In the future, it is expected that there will be dedicated service providers for Paediatric Surgery in two dedicated facilities, with the possibility of Mauritius becoming a regional centre of excellence for children's surgery, facilitated by the intended outreach program from Australia extending to Madagascar.

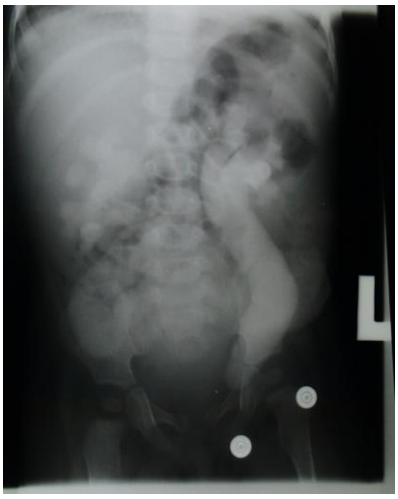
The Australian High Commissioner (Her Excellency Cathy Johnstone) is shown in theatre at the Flacq hospital with Professor Dewan and Dr Haresh Burton and Tim Davies, when the Australian High Commission staff visited the hospital during the tour of the ward by the Minister for Health, the Honorable Satya Faugoo.

Consultations

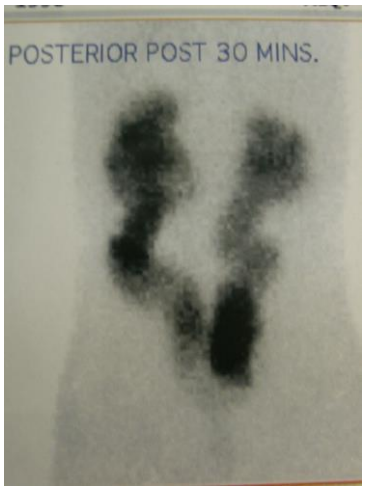
As usual the clinic on the first day was busy, during which the majority of cases were seen, many of whom had a radiological investigation and a later review. Other children were seen between operative cases, with a total of 138 consultations occurred. Interestingly, a large number of new cases continue to be seen, as well as patients who required further surgery or review of the outcome of previous complex anomalies and surgery.

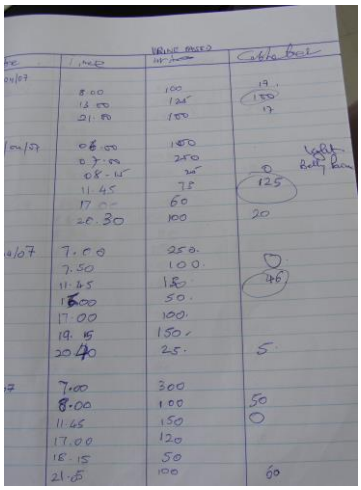
The initial clinic ran like clockwork: Ninety-one patients were methodically clerked, examined and assigned to further care with the assistance of many junior staff, nurses and medical record staff. Investigations were organized in a timely fashion and appropriate patients were admitted for surgery. This major clinic had the involvement of the Flacq senior and junior surgical staff and the participation of members of SACIM. Also, Dr McCarthy was able to assess the patients' fitness for surgery, following the decision to operate, and Rose Wilson assisted in recording the necessary follow-up of the patients.

The cases seen in the clinics and in the ward included 21 children with an anorectal anomaly, 38 hypospadias boys, 6 with Hirschsprung's or constipation**,** 3 with bladder exstrophy/epispadias, 9 with urethral obstruction (COPUM), 4 bladder or renal stone disease patients, 10 with a neuropathic bladder, 4 with obstruction at the junction between the pelvis and ureter of one or both kidneys, 14 boys with testicular anomalies, including 3 who required redo surgery and one who had bilateral infracted testes, 6 with a variety of genital anomalies, 4 dysplastic kidneys or renal failure cases, and assorted other renal anomalies patients, plus one child with a branchial fistula and one with a colovesical fistula. Some patients had more than one anomaly.



Peerboccus was born with an imperforate anus requiring the formation of a colostomy; therefore he initially had to wear a bag on his abdomen to collect his bowel motion. A kidney ultrasound and Xrays showed him to also have significant kidney damage resulting in a life threatening infection. Surgery by the visiting team has saved his kidneys in 2006, and has formed his anus and rectum, and closed his colostomy, in 2007.





Nine boys were treated for the condition of posterior uretrhal obstruction (COPUM), many with associated renal compromise. These cases, and those with either obstructed kidneys or abnormal bladders, indicate the need for better medical staff and community education regarding the importance of proactive treatment of renal tract anomalies. The left xray (above) shows the blockage in the urethra, and the nuclear medicine study (centre) indicates the renal injury. The voiding chart indicates how easily families can learn to assist with the investigation and treatment of such children.

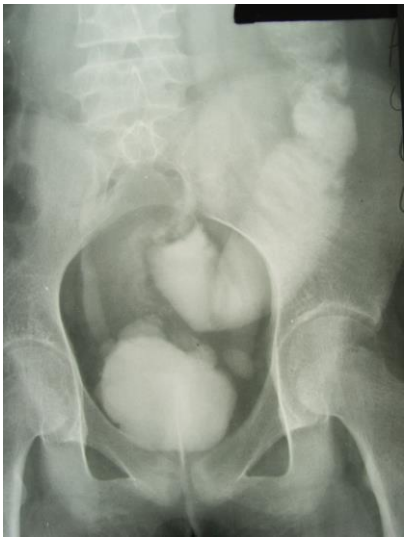
Surgical Cases

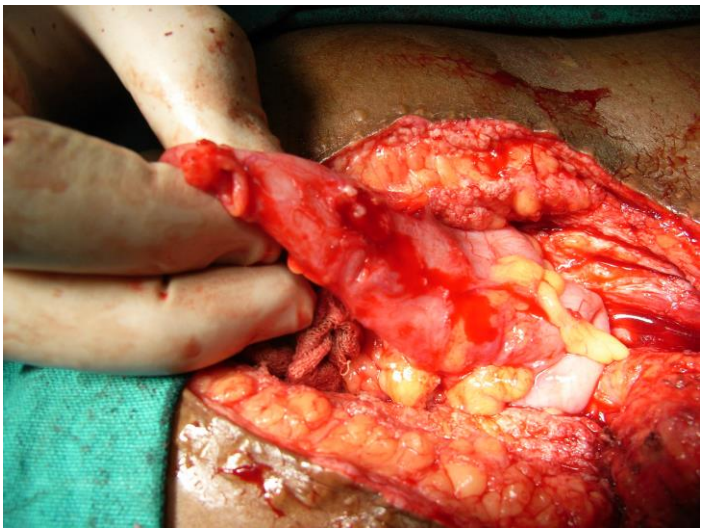
A total of 66 operations were performed on 25 patients, who had a total of 27 Anaesthetics: the major work load came from:

Hypospadias repair	5 cases
Pena type procedure	8 cases
Orchidopexies	6 cases
Urodynamics	4 cases
Laparoscopy	2 cases
Cystoscopy +/- fulguration	12 operations

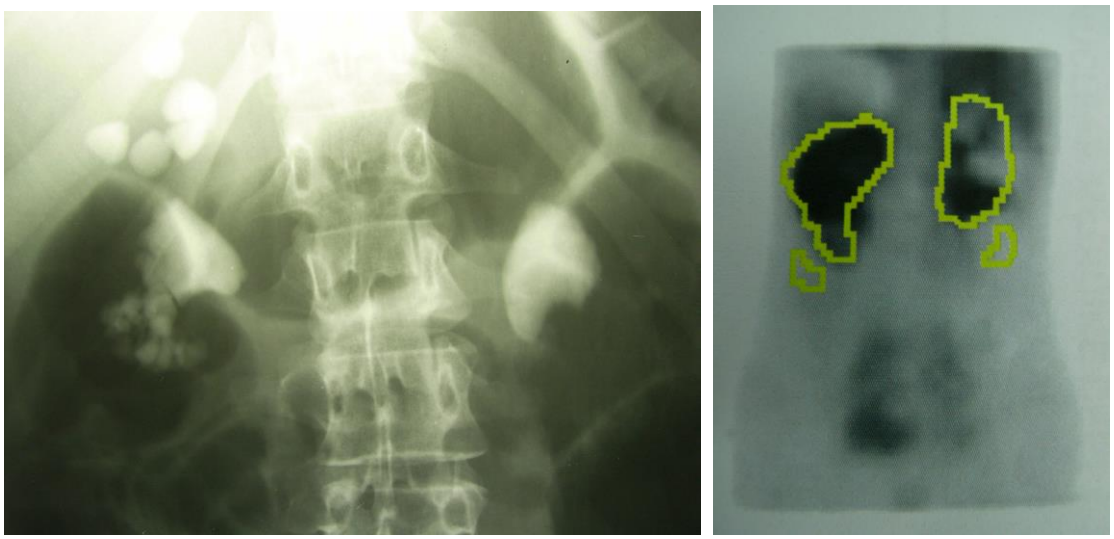
Other cases included one closure of colovesical fistula, Ureteroureterostomy, colostomy in an adult Hirschsprung's, urethral dilatation, nephrolithotomy, pyelolithotomy, 2 pyeloplasties, Lumbotomy nephrectomy, double J stent insertion, and 2 herniotomies.

Complications only occurred in one case, described below. Of the patients either reviewed of operated on 50 will require follow-up surgery.

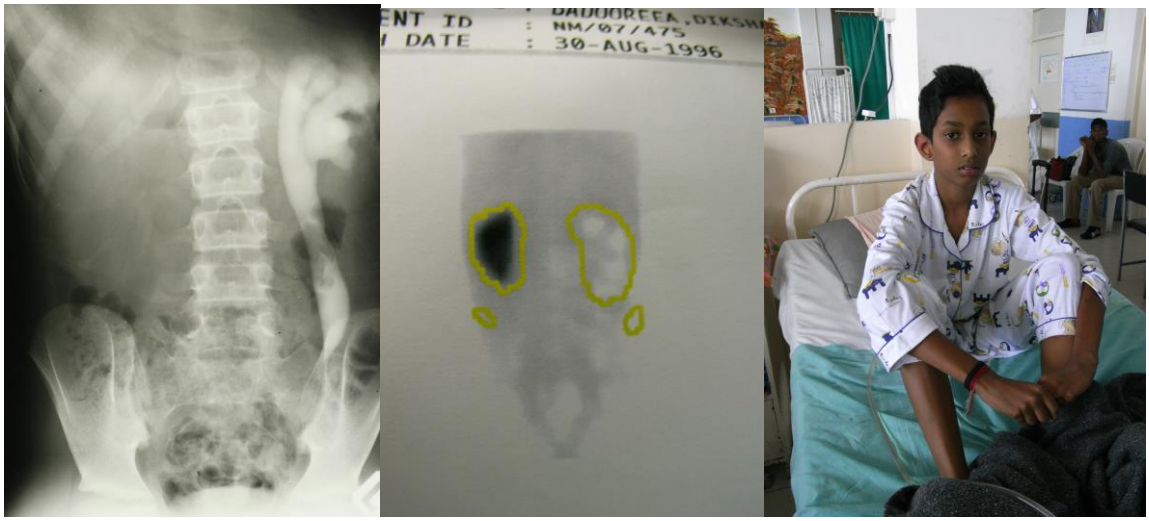




Beeltah has features consistent with a neuropathic bladder, with clubbed feet and urinary incontinence and dilated kidneys. Previously, the 10 year old girl had been operated on for the removal of a diverticulum on the dome of her bladder, following which she developed a fistula between her bladder and her sigmoid colon (shown on xray above). After initially refusing to let the girl have surgery, the family agreed to what was a successful closure of the opening between the bowel and the bladder (right).



Justine was one of two family members who presented with stones in their kidneys. Justine required an operation on each kidney to improve her renal function and stop her serve pain. The abdominal xray (left) shows the large amount of cysteine stone in each kidney and the nuclear medicine study (right) shows the damage to both kidneys, especially the right.



Diksharuth (right) is seen after surgery on his left lower ureter and obstructed right kidney. Despite a return to theatre for the management of a leak from the left lower ureter froma psot obstructive diuresis he was home in 5 days. The preoperative intravenous pyelogram (left) and nuclear medicine study (centre) showed the precarious state of his renal tract before surgery, which was best treated urgently.

Future Direction

Paediatric Surgery has developed greatly since the current program started in 2001. However, there are a number of deficiencies that could be overcome more quickly with the development of a strategic plan for the service, which should incorporate the development of two centres of excellence, staffed by those who have been involved with the training program. Flacq and Jeetoo would be the hospitals of choice, with Dr Hosany Nazeer working with Dr Anwar Fakim at Jeetoo and Dr Steve Ng and Dr Naresh Burton forming the team at Flacq. This arrangement would facilitate the setting up of the visits and facilitating the follow-up. More importantly it would give the focus of service that would improve the ability of the community to reach those with the greater experience and education in the specialty, more easily.

Also, there should be a community group to promote the services for children, which would ideal stem from the work previously focused overseas, namely SACIM.

Most of the recommendations in the following list are as they have been previously. WE have now reaching a stage when these recommendations are becoming more urgent, particularly as it should be considered unacceptable for laparotomies to be preformed through the midline, surgeons without training should not be operating on these cases, and those with recurrent urinary infections and incontinence should be deal with more proactively. Importantly, Hirschsprung's disease and renal failure should be able to be treated proactively. We recommend:

1. A Paediatric Surgical symposium for GP's and Paediatricians.
2. Paediatric Radiological training for Radiologists and Paediatricians.
3. Paediatric Anaesthetic skill enhancement.
4. Develop Paediatric Surgical centres, according to the findings a scoping study.
5. Cases to be considered for transfer out of Mauritius should be vetted by those closely involved with the Paediatric Surgical visits.
6. Strengthening of auditing processes for Paediatric Surgery.
7. Mauritius should aim to become a regional centre of excellence to ensure ongoing quality of care in Paediatric Surgical practice.
8. The University, the Department of Health and Quality of Life and the surgical community should work toward developing a diploma exam in Paediatric Surgery.
9. Cases should be vetted and investigated appropriately prior to the specialist visit.
10. Two visits should occur in 2008, one to each focus hospital.

The visits to Mauritius are intended to provide education to the local team. Thus the large number of people in theatre (above) and the large group of staff who help with the outpatient clinic (below).