Mauritius

Paediatric Service Training
for
Urology/Surgery and Anaesthesia

8th – 20th December 2004

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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

Overview

Becoming involved in developing Paediatric services in Mauritius has been both a privilege and a pleasure. The families and the children have given the members of the visiting team, and the Mauritians working with them, the energy to allow a great deal of work to be performed during the visits. Treating the children has been the primary focus, but ensuring that children have excellent care in the future is the ultimate aim.

The first of the Paediatric Surgical visits was in response to a boy coming to Australia for surgery that was able to be performed in Papua New Guinea – why not in Mauritius? Two years later, in 2001, the first Paediatric Surgical visit occurred, with the resent visit being the forth. There have now been 411 clinical contact episodes, and 139 operations on 88 patients, some having had separate operations at different times, or multiple procedures during the one anaesthetic.

The advances that have been seen up until now have been the earlier referral of cases (thus there are 31 cases already booked for the visit in February 2005), the awareness of the public of Paediatric Surgical services being available in Mauritius, and the greater involvement of the junior medical staff. However, there is much improvement to be had. Unfortunately, there are still surgeons who have not become aware of where to turn to for assistance with Paediatric surgical case, and in attempting to improve the outcome for the patients; they have probably been disappointed with the outcome of their management. Ensuring that there is a centre of excellence for parents, Paediatricians and Surgeons to reach out to is important for Mauritius children needing surgery.

The recent visit resulted in the review of 78 patients, 28 of whom had 43 operations, during 88 hours of operating. Such a work load could not have been achieved without the cooperation of many people at Jeetoo Hospital in Port Louis, or without the support of the Hospital administration and the Ministry of Health and Quality of Life. We also owed a debt of gratitude to the Surgeons and Paediatricians for referring the cases.

The parents, the children, deserve a special mention for the trust and support they showed. The visit was a great way to share the spirit of Christmas – thank you.

The children, parents and staff were honored by a tour of the Ward by the Health Minister (left) and the Australian High Commissioner (3rd left).

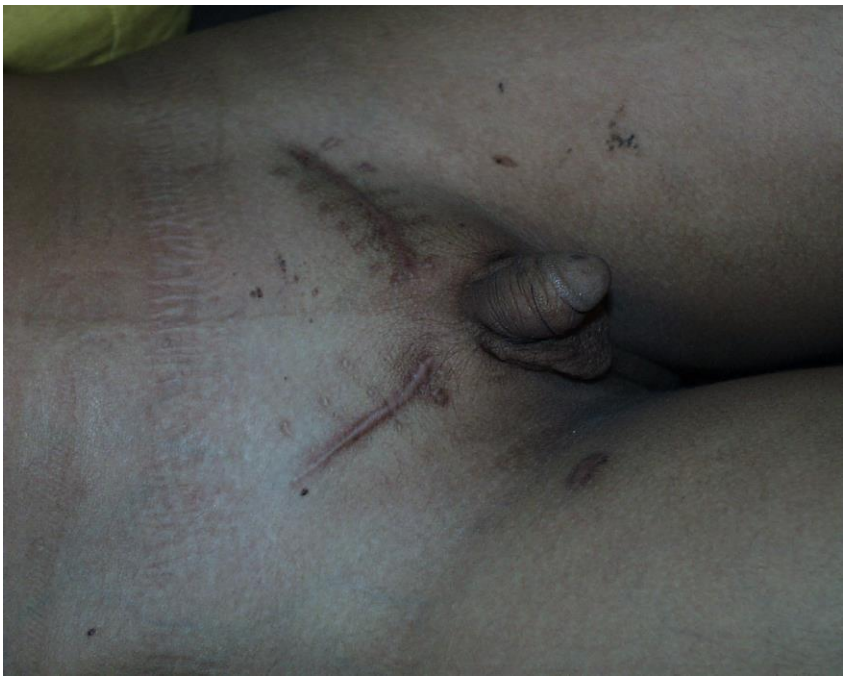
Consultations

Most of the 91 consultations on 78 patients were conducted during a clinic on the first day. Ten patients were seen again after investigation, some of whom were operated on as a result of the findings of the Xrays, which included ultrasound, nuclear medicine renal investigation, and Barium enemas; three children were reviewed in the ward after discharge.

The initial clinic was notable for the large number of patients who all seemed very tolerant of the long wait for the visit, and during the clinic itself. Also notable was the excellent organization of the clinic. Many junior staff, nurse and medical record staff assisted in ensuring the patients were seen efficiently. Investigations were organized in a timely fashion and appropriate patients were admitted for surgery.

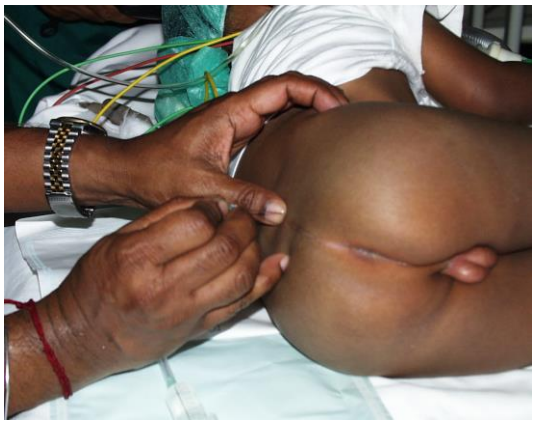
The clinic was privileged to have the involvement of members of SACIM, and involved Dr Brownhill assessing the patients' fitness for surgery, following the decision to operate.

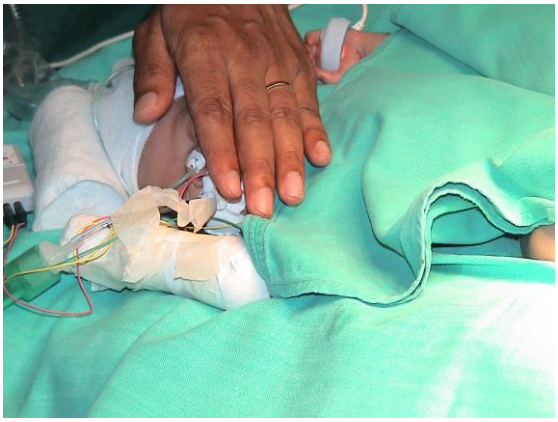
Patients with simple conditions were seen as part of the visit, which will allow for the Paediatric Surgical approach in these cases to be highlighted. One boy, who had lost both testicles, is an indication that careful selection of staff for the care of children should be considered, and further training is needed.



Surgical Cases

A total of ***43 operations*** were performed on ***28 patients***, 15 of whom had surgery for an anorectal anomaly and 6 for Hirschsprung's disease. Other patients had surgery for an appendix mass (1), urethral obstruction (2); diaphragmatic hernia (1); dysplastic kidneys (2); reversal of a gastrojejunostomy (1); hypospadias (1); vaginoplasty and clitoroplasty for intersex (1); nephrolithiasis (1); wound revision (1); umbilical hernia repair (1); ureterocelectomy (1).

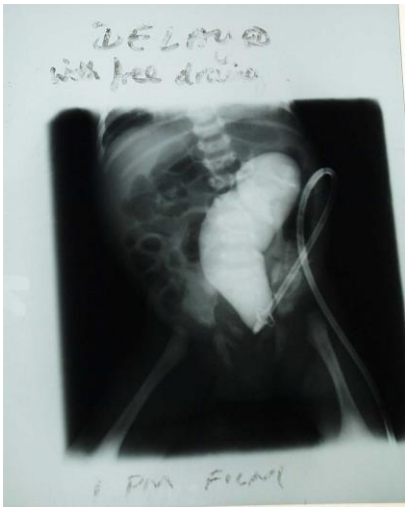


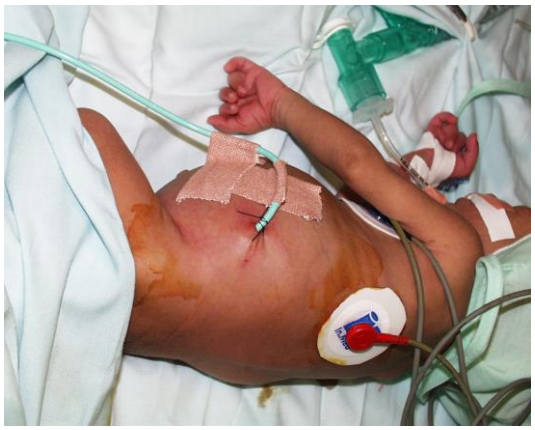


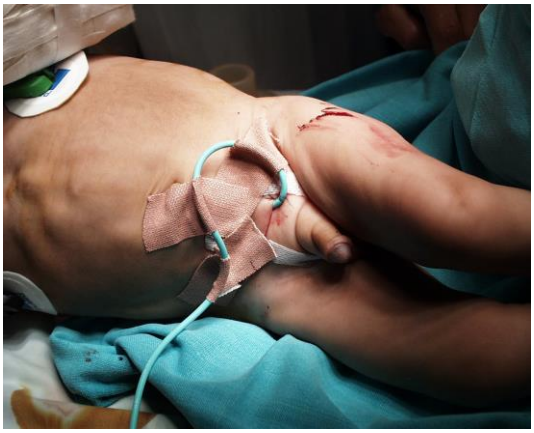
Teaching of the use of caudal anaesthesia and protecting patients from hypothermia were lessons taught to the Anaesthetists, and the understanding of their role was relayed to surgeons.

Dr Hosany (2nd left) and the Chief Anaesthetist (right) are seen with the resident staff. The nursing staff from ward 9 (right) are seen in a brief moment away from their heavy work load.

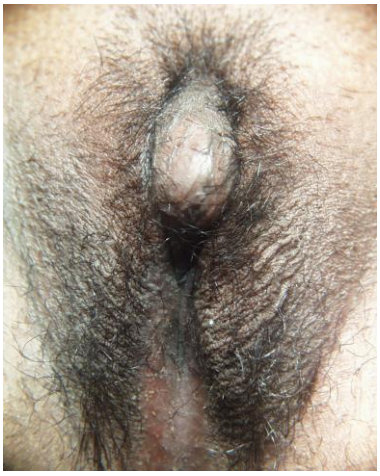
In 2003 this little boy had a nephrostomy tube inserted (right + below), followed by a second operation to remove the nonfunctioning kidney, after the pus had been drained. In 2004 the cystic dilation in the bladder, causing ongoing infection, was removed via a bladder incision (below-right). The mother is now happy to have a well baby.

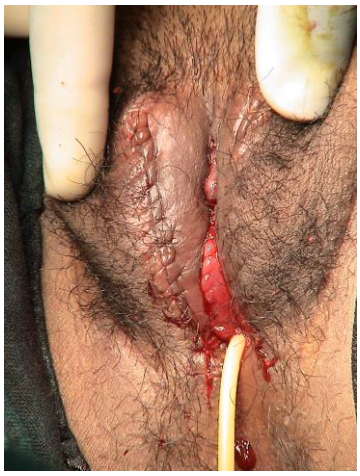


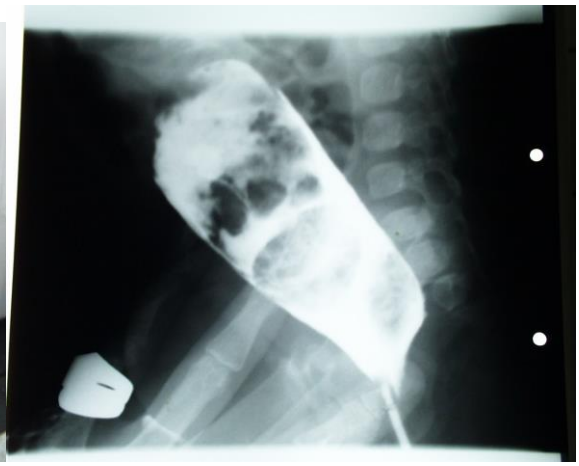


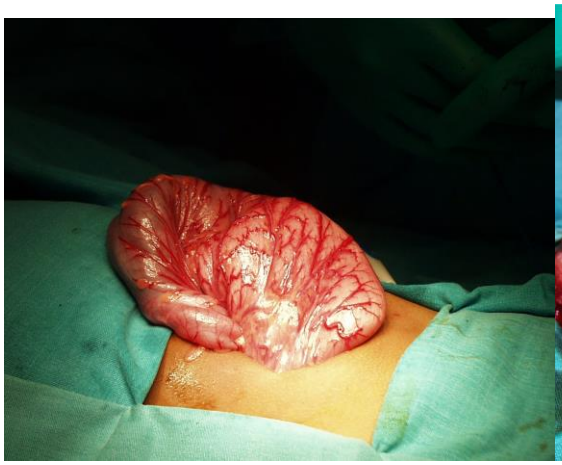


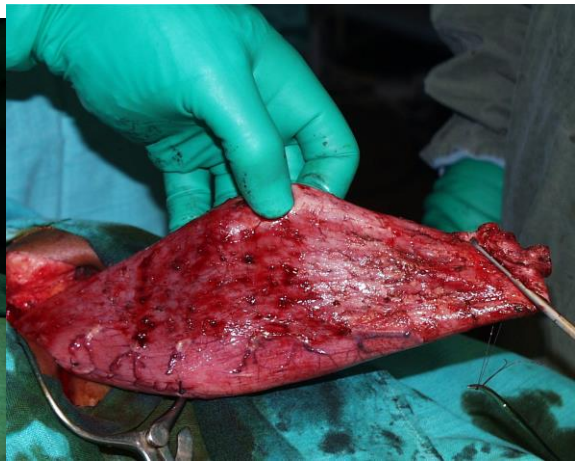
A life changing operation was performed in this teenage girl, who had been menstruating via her urethra, her vagina was completely covered, and she had a male-like penis. After the post operative swelling settles she will be normal.



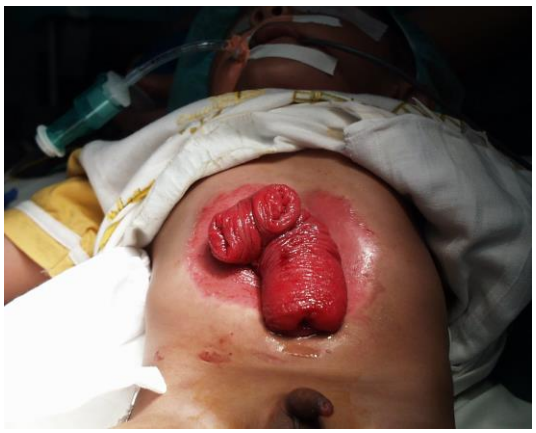


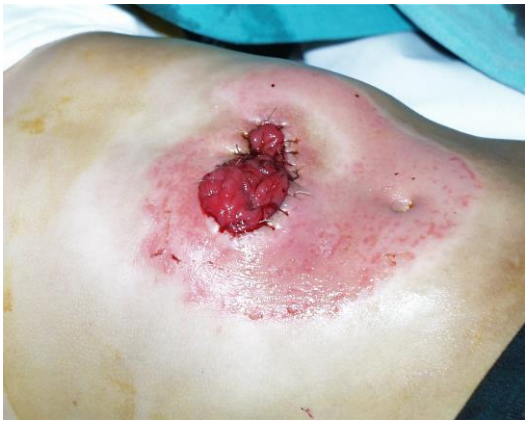






This beautiful little girl was able to have her anorectal anomaly, with the huge bowel as show, repaired in one operation, without the need for colostomy. The Barium xray alerted the surgeons to the need for the abdominoperineal procedure.





Colostomy revision was one of the important points of education in the management of patients with anorectal anomaly and Hirschprung's disease.

Teaching

Visits such as this are a multidirectional learning experience. Mauritian Surgeons and Anaesthetists learnt about the use of caudal injection for regional anaesthesia. Other lessons included:

1. Colostomy revision to prevent prolapse.
2. Cutback for minor anorectal anomalies.
3. Anterior anal sphincter plication.
4. Posterior anal sphincter plication.
5. Pena anorectoplasty - single stage.
6. Swenson procedure - single stage.
7. Skin crease incision for orchidopexy.
8. Urethroplasty for hypospadiac cripples.
9. Ureteric Mitrofanoff.
10. Lumbotomy nephrectomy.
11. Ureterocystoplasty.
12. Bladder neck reconstruction.
13. Genitoplasty – female.
14. Diaphragmatic hernia repair.
15. Body temperature maintenance.
16. Use of transverse incisions.

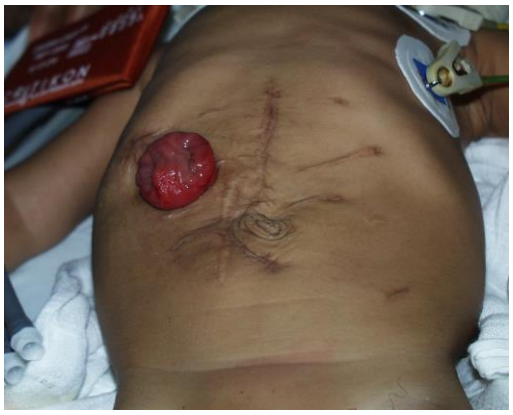
As can be seen there were many lessons to be learnt. The difficult circumstances under which the team worked gave the opportunity for the visiting team to learn how to deal with many complex situations.

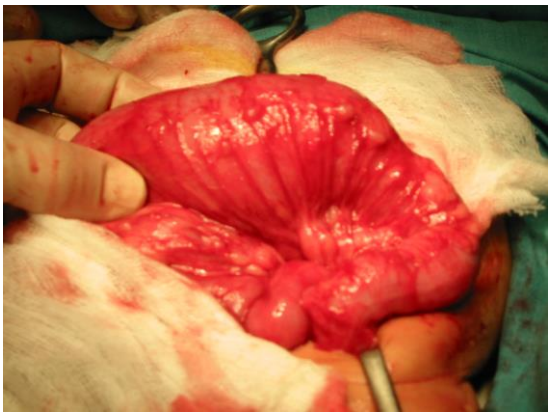
A great advantage to the transfer of skills was the presence of a number of junior staff observers and participants in the both the surgery and the management of the Anaesthesia. A resident medical officer was scrubbed in for almost all operations

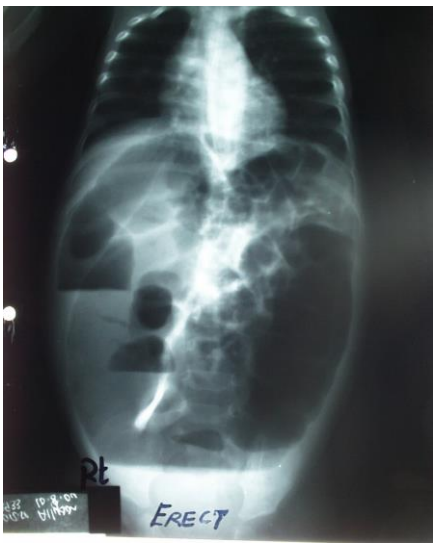
Case histories that highlight some of the problems that have arisen from a lack of a referral centre and the previous lack of specific Paediatric Surgical training include, but are not limited to:

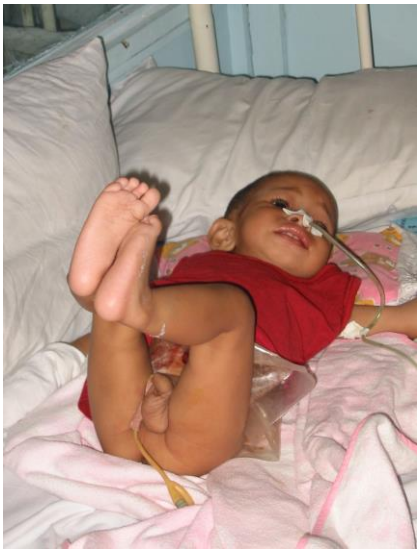
Case 1:

A little baby presented with a bowel obstruction in the newborn period, resulting in an operation that created a relatively proximal colostomy and the formation of a connection between the stomach and the small bowel (***Gastrojejunostomy)***; decisions taken by a team who did not have the advantage of Paediatric Surgical support. The surgery in December reversed the inappropriate connection to the stomach and repositioned the colostomy, which will enable a better final outcome following surgery next year. The pictures show colostomy adjacent to the two parallel midline incisions, and the dilated bowel beyond the dysfunctional colostomy: the Xray shows the boy's neonatal bowel obstruction that confused the initial treating surgeon, despite which the boy is seen "kicking up his heals" the day after his recent long operation. He was discharged well only five days later.



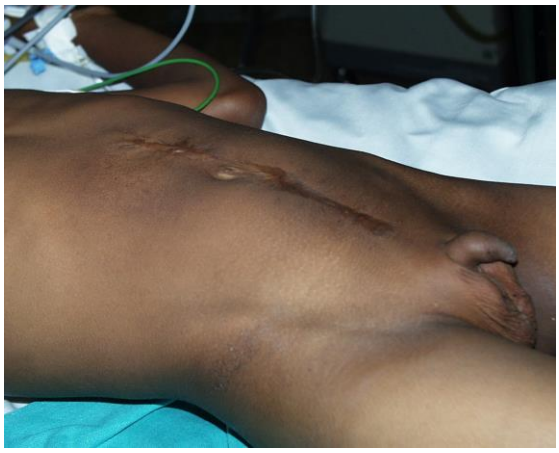


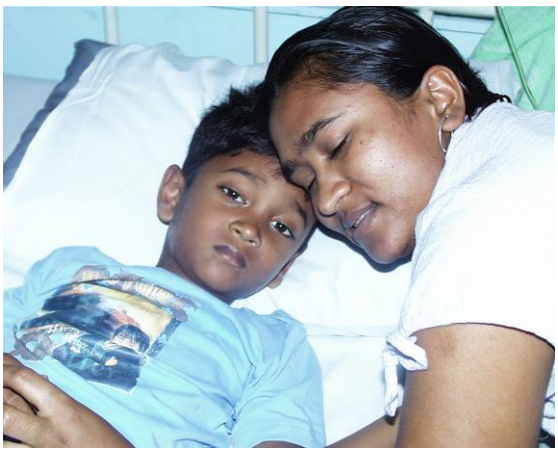


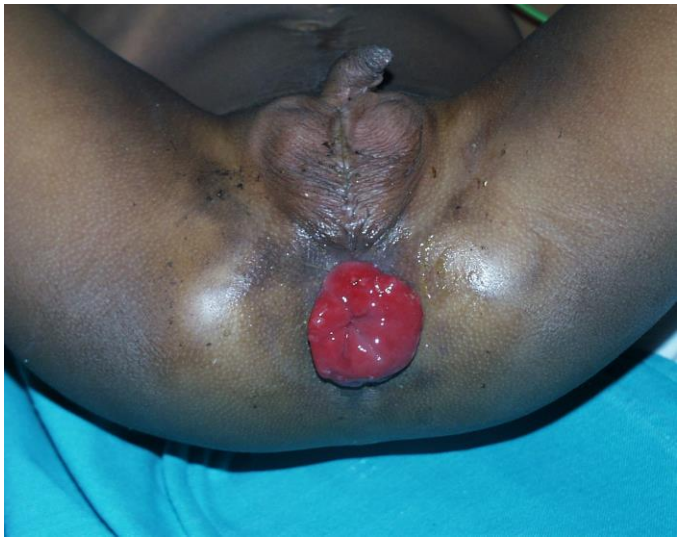


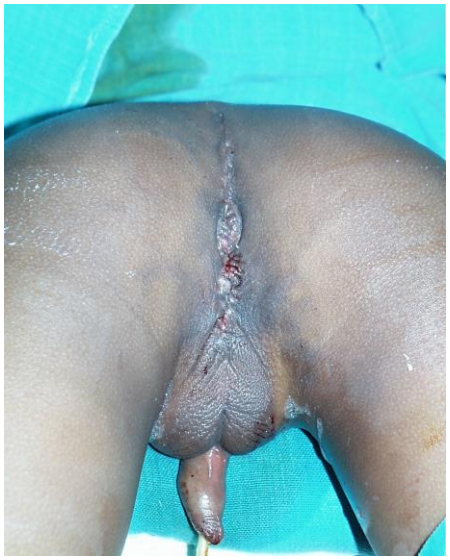
Case 2:

Moykoo, a six year old boy born with an imperforate anus, had previously had a colostomy formed, an abdominoperineal procedure to repair the anal defect, but with an unfortunately poor outcome, but like any major surgery, it is difficult to get good results without training. The abdomen is seen to be distended, which was due to a huge expansion of the rectum, and the "rose-flower" appearance of the anus was also a concern. The apprehension seen in the boy before the operation was put to rest with a 6 hour operation that removed the abdominal mass and gave him a normal appearing perineum, as seen in the forth photo.



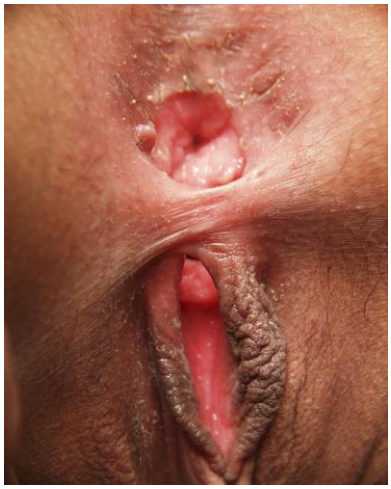


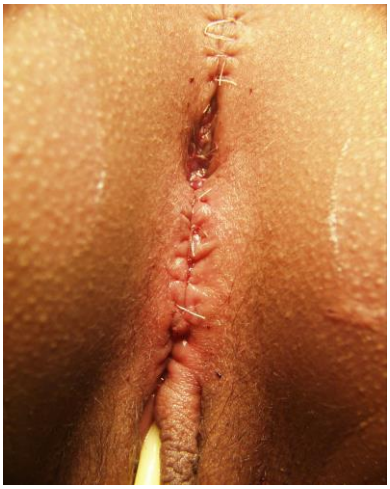




Case 3:

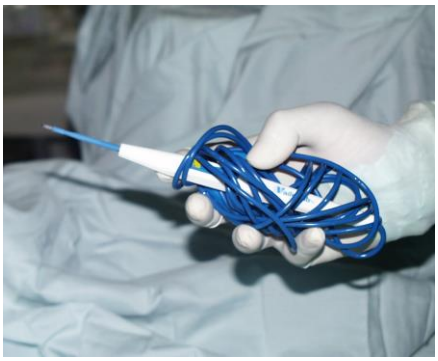
Following this girl's operation she did not appear to have pain. Why? A 10 year old girl at the time of her recent surgery, she had been born with an anorectal anomaly for which she had an operation, with the unfortunate outcome that she was passing faeces through her vagina. The family was very concerned about her future, and she herself was very keen to have a surgical solution. The pictures show the transformation of her perineal anatomy, and the smile on her face, with out any pain experience, with a powerful outcome that had a negative impact on the need for analgesia. Thus her smile and lack of drugs.

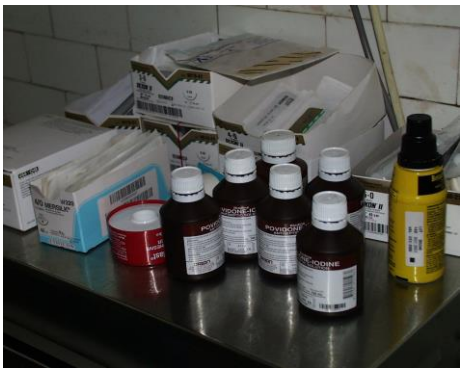




Donations

Air Mauritius, Ansell, Tyco, Bard Urological, and Smith, Kline and Beecham, and hospitals including Geelong Hospital, St John of God Hospital (Geelong), and Western Hospital, Sunshine, were generous donors to the project. They provided transport, diathermy pads, diathermy handles, ureteric catheters, feeding tubes, Nelaton catheters, urethral catheters, dressings, Elastoplast tape, micropore tape, betadine, gloves, and sutures.





Future Direction

The future of Paediatric Surgical care in Mauritius is assured, provided a number of essential steps are now taken:

1. Future visits involved a symposium component.
2. Teaching the teachers remains the focus.
3. Three Paediatric Surgical visits per year are arranged of two weeks duration.
4. Two Paediatric Surgical centres should be established, one associated with the cardiac surgical centre and the other attached to the neonatal unit.
5. Dr Nazeer Hosany is appointed to a position in Australia in 2006.
6. In 2006, Dr Hosany should return for the Mauritian Paediatric Surgical visits.
7. Cases to be considered for transfer out of Mauritius should be vetted by those closely involved with the Paediatric Surgical visits.
8. Those able to access care through a private facility in Mauritius should not disadvantage those who rely on the public system, but neither should they be denied access.
9. Those surgeons involved in the care of the more common surgical conditions in children, who are not the nominated subspecialists, should be accredited to do so.

In particular it is important to ensure that medical and nursing staff develop an approach that recognizes that subspecialty Paediatric Surgery is now available in Mauritius. Also, it is important that the SACIM group is recognized for their contribution to the development of the specialty, through having made the link in the first instance, and it would be essential that they remain closely involved with further developments.

Mauritius is full of medical and nursing talent. Training, and the establishing process that ensures a quality focus, will allow the resources to be used to their fill.

A theatre assistance helps maximize resource utilization. Necessity is the mother of her invention, and was the mother of many of the solutions for patients treated during the two week visit.

Lives saved, suffering lessened, and mothers and children made happy – what a great way to lead up to Christmas.