

Papua New Guinea

Paediatric Surgery and Paediatric Urology



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Professor Paddy Dewan

**A Tertiary Health Services Project
in association with the**



Kind Cuts for Kids Foundation

Overview

Paediatric Surgery in PNG has come of age! Now we need to ensure that the skills that have been developed are used, by ensuring the surgeons have the equipment and the anaesthetic support to do their job.

The education program for Paediatric Surgery started in 1993, and has involved visits by Albert Shun, Erroll Simpson, and now 21 visits by myself, in association with a number of AUSAID funded programs, the latest being the tertiary health Services program. A feature of this visit was the ability to be involved more in student teaching, because of the clinical skills of the PNG Paediatric surgeons; including lectures on neonatal emergencies, acute abdomen, obstruction in the urinary tract and jigsaw puzzles, audit and common Paediatric Urology problems.

Five potential candidates have spent time in Australia and two surgeons now work in PNG – McLee Mathew graduated in 2002 and Okti Poki obtained his PNG Paediatric Surgical Diploma in 2004. Ben Yapo is the third successful candidate. He is nearing completion of his training in Melbourne and Sydney, after which he will take up an appointment in Mt Hagen, with his Diploma exam planned for late 2008.

Radiological facilities, anaesthetic support and basic supplied of sutures and instruments are the major short-falls that detract from the education these men have received translating into action. However, major steps have been taken. The training of all minor Paediatric Surgery is now done by the PNG team, and much of the major procedures for anorectal anomalies and Hirschsprung's disease are being attended to by Dr Mathew and Dr Poki.

This visit incorporated the additional training of Ben Yapo, who came from Sydney, and teaching of Rooney Jagilly, who was funded to participate by the Kind cuts for Kids Foundation. A disappointing aspect of the visit was the recognition that a large part of the function of the visits now is to allow the Paediatric Surgeon to muscle in on theatre time in Port Moresby and to provide suture material that would not otherwise be available. These are obviously not good reasons for a team to come from Australia.

Problems with service delivery to children with Paediatric Urological problems still need to improve, with the lack of ultrasound machine being part of the problem, and the lack of paediatric Urological training of the team in Port Moresby. This could be addressed by Okti Poki being given further training in the specialty, and by a shift of focus away from anorectal anomalies to urological problems.

The Paddy Dewan Paediatric Surgical Foundation, founded by the Huon Gulf rotary Club will a major driver of care standards, by assisting with community education and by supporting surgeons with additional equipment, and patients with otherwise unobtainable transport.

The formula for the future for Paediatric Surgery for PNG can from a meeting between Dr McLee Mathew, Dr Okti Poki, Dr Ben Yapo and Professor Dewan, and discussions with the Dean of the Faculty of Medicine.

Problems and Recommendations

Recurrent Clinical Cases Issues

1. Midline laparotomy to be avoided in children - *peripheral surgeons should seek advice from the Paediatric Surgeons*
2. Urinary infections are not being adequately investigated – *ultrasound machines should be made more widely available.*
3. Urinary tract infections are being under diagnosed – *urinary sepsis should be considered in any febrile child. Medical students and GP's should be the target of this education.*
4. Cystoscopic and Urological training for Paediatric Urology needs more attention – *Dr Poki should come to Melbourne for 3 months to get further training.*

Clinical System Issues

1. Intervention before transfer should be with consultation to subspecialty team.
2. Cloacal anomalies should be referred centrally.
3. Peripheral visits should be by the PNG Paediatric Surgeons.
4. Skills in the Anaesthesia need to be developed for both Anaesthetists and ATO's, to give support to the developing Paediatric Surgical team.
5. Radiology services should be improved, with a focus on basic equipment.
6. Supplies of sutures need improving.
7. Further basic Paediatric Surgical instruments are required.
8. A country-wide service plan for Paediatric Surgery should be developed.
9. The senior anaesthetic staff should spend more time with the visiting team.



Services for children with Paediatric Surgical needs have expanded to include dedicating a part of the Lae surgical ward to their care. This should now happen in Port Moresby.

Proposed Staff distribution

2008	Dewan, Paddy	– Paediatric Urology Workshop, September
	Dr Padma Rao	– Paediatric Radiology Workshops
	Anaesthetist	- two visits - one in September
	Mathew, McLee	– Lae (PNG Coordinator)
	Okti Poki	– Moresby
	Ben Yapo	– Mt Hagen
	Charlie Turharus	– Moresby - travel with visitors
	Outreach	– McLee + Okti (shared)
		– Rabaul; Goroka; Hagen + Madang
	David Croaker	– Solomons
2009	Shun, Albert	- timing to be arranged
	Anaesthetist	- two visits - one with Albert
	Mathew, McLee	– Lae (PNG Coordinator)
	Okti Poki	– Moresby
	Ben Yapo	– Mt Hagen
	Charlie Turharus	– Melbourne
	Outreach	– McLee, Okti + Yapo (shared)
		– Rabaul; Goroka; Madang
	McLee Mathew	– Solomons

With the ability to deal with the clinical cases only one visit is required per year, with more focus needed on Paediatric Urology. Any additional funding should be used for outreach activity by the PNG surgeons and for suture material, funding anaesthetic assistance from Australia, plus ultrasound and cystoscopic equipment.

Paediatric Surgical Trainees

Benjamin Yapo Paediatric Surgical Trainee, Sunshine Hospital 2005; Advanced training, Sydney 2006; Paediatric Surgeon, Mt Hagen 2007: Diploma exam September 2008

Charlie Turharus MMed 2005; Two Years Service 2006, 2007; PNG Senior Registrar 2008; Australia 2009; Rabaul 2010. Diploma Exam September 2010.

A further candidate needs to be identified to complete the contingent of five Paediatric Surgeons, with that person being appointed to the second position in Port Moresby in 2013. The outreach to the more peripheral centres should be organised by the Group, in cooperation with the Department of Health and the Paddy Dewan Paediatric Surgical Foundation.

Surgical Service:

Forty four patients had 44 diagnoses when seen in the clinics and ward and, during 74 hours of anaesthetic time, 29 operative sessions occurred on 27 patients, two of whom had two anaesthetics. A total of 50 procedures were performed, with different patients having more than one operation under the same anaesthetic. 13 patients had a caudal anaesthetic as part of their procedure. Much of the surgery was performed by the PNG team or the Solomon Island visitor. Only one complication was noted during the stay – an early colostomy prolapse, and delay in removal of a nephrostomy tube was also noted after the trip.

The cases seen and the operations are given in the attached tables.

Notable Case 1:



Shadrach was born with caudal duplication and an imperforate anus, requiring the formation of a colostomy. The pictures show the transformation with the genital and perineal surgery that included pelvic osteotomies, and the look of contentment on the mother's face after the operation.



Notable Case 2:



One of the patients who indicates the need for further significant training in Paediatric Urology, both in the community and of medical staff. His huge kidney drained 3.9 litres of urine, and underwent a successful pyeloplasty to resolve his “plumbing” problem.

Notable Case 3:



This also shows how easily major problems in the urinary tract can be overlooked. Urinary incontinence had been solved by a previous bladder neck procedure, but failure to adequately investigate urinary infections has resulted in badly damaged kidneys with impending renal failure



McLee Mathew, the first Paediatric Surgeon in PNG, is seen with Professor Dewan and Rooney Jagilly (top left). Okti Poki, who was awarded the Paediatric Surgical Diploma in 2004, writes his notes (top right), while Dr Ben Yapo enters the data on the computer (bottom left), as Dr Colin Gordon trains the anaesthetic registrar how to manage a patient (bottom right).

