A project of Kind Cuts for Kids,

Supported by

Professor Paddy Dewan

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Introduction

The three KCFK's visits to Mozambique have come because of a meeting between Dr Amâncio Oliveira and Professor Dewan during the September 2022 mission to South Africa. The very large need of both the community, and those providing care to children with surgical disease, was evident during all three visits, including the need for and subsequent supply of a cystoscope to investigate and treat many of the conditions seen in Paediatric Urology. This follow-up visit was to further the training in the management of patient requiring cystoscopy, plus a wide range of other Paediatric Urology and Paediatric General Surgery conditions.

The ongoing need for enhancement of surgical services for children in Mozambique ***(Moçambique)***, has the backdrop of the country being the 35th largest country in the World, divided into two topographical regions by the Zambezi River. It is the only country in the world with a modern firearm on its flag, which reflects the struggle for independence, gained from the Portuguese in 1975, who had initially settled in 1498, after the arrival of Vasco de Gama. A civil war wracked the country from 1977 to 1992. The country, in 2022, had a USD 558 per capita GDP, or 18.41 billion USD GDP for the whole country, compared to the world gross domestic product which was approximately 12,647 USD per capita in the same year, with Mozambique one of the smaller economies, ranked 126.

The country is located on the East side of Africa, across the water from Madagascar. Almost all the population is black African; 56% are Christian, 26% traditional faiths and 17% are Moslem, with a total population of 32 million.

Maputo, previously named ***Lourenço Marques***, became the capital in 1898, with the name changed in 1976. The port city, with a population of around 2 million, is located 120 Km from the South African Border in the southern part of Mozambique, in which there are three medical schools, the first founded in 1962, one of which is located close to the Maputo Central Hospital, in which we have worked during the three visits. The hospital has existed for over 100 years and employs 4000 people, with 1500 beds, including all major medical departments, which are in low level buildings spread over a large area, with notably crowded wards.

Paediatric Surgery

Since the first visit in 2023, there have been two new graduates in Paediatric Surgery in the Paediatric Centre within the Maputo Hospital; the team manages most of the Paediatric Urology cases. The case load continues to be enormous (in fact, ongoingly overwhelming) and the resources to manage the cases are not relatively limited, they are extremely limited … but there are many improvements that are able to be realized, and have been advanced from the time of the first visit in 2023. Most notably, ***the department did not have a cystoscope***, which was one of the pivotal reasons for the return visit. Kind Cuts for Kids, working with the Manningham Rotary Club, with additional funding from Rotary International, were able to procure and delivery this ***essential*** piece of equipment. **We now need to ensure the provision of a Paediatric resectoscope!**

The Paediatric surgical ward is in the same building as Paediatric Medicine (including Nephrology and Oncology), and the Paediatric Intensive care, the latter being relatively well equipped. The neonatal unit, on the other hand, is in another building that is quite a walk, but within the grounds; like the Paediatric surgical ward, the space is crowded, with each of the nurses having an unmanageable 15 patients to care for. As for the previous two years, the outpatient clinic was conducted in the treatment room of the ward – see in the second picture.

The left photo shows the overcrowding … two babies in the same humidicrib: the right the outpatient “clinic”.

The number of operations was curtailed during this visit because of two main factors. One the lack of funding for transport of theatre staff after the 3pm hospital transport conclusion, the other being the lack of the drug Fentanyl for the management of the intraoperative pain management.

Ongoingly, the previously donated cystoscope is very adequately cared for, as the instruments for open operations. However, in vast contrast to standards in Australia, when cystoscopy was performed the camera and light-lead were cleaned with alcohol, as is the practice in many

Paediatric Surgery (cont'd)

similar countries, and instruments are soaked in Cidex, a practice that is considered unsafe in Australia and has not been used for decades. However, best practice of wound preparation with an aqueous iodine solution continues this year. Many of the other practices that are long outdated in Australia have, due to resource limitation, continued for each of the three Kind Cuts for Kids visits to Mozambique.

The availability of the new theatre continues to enhance the ability of the team to care for children, but the need for disposable equipment is highlighted by the need for the donations pictured above, including the ring retractor, which despite being an essential tool in Paediatric surgery is featured in the above (right) photo.

Points of Learning

As for the two previous visits there were many points made during surgery, the clinic consultations, during ward rounds, impromptu lectures, and surgery. Most, but not all are listed below; the underlined lessons are illustrated photographically at the bottom of the page. The standouts for this visit were:

1. The precision surgery for Hirschsprung disease using the Swenson technique.
2. The precise anatomy of congenital posterior urethral obstruction.
3. Insertion of nephrostomy tube.
4. Fulguration of posterior urethral obstruction.
5. Management of urine drainage bags post-surgery.
6. Detail of pyeloplasty dissection and anastomosis.
7. Management of a database for patient management.
8. Heminephrectomy for Wilms tumour management.
9. When not to operate on neuroblastoma.

Clinical Care

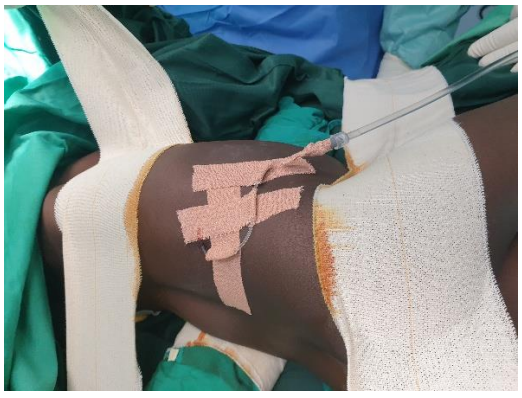
Over the three visits, there have been 51 patient operative episodes on and a total of 172 patients that have been treated, and 20 seen on more than one visit. In 2025 31 operations on have been performed on 12 patients, one had two anaesthetics and one had a procedure under local anaesthetic.

Diagnoses included:

COPUM	–	4
Cloaca/Urogenital sinus	–	3
Bladder exstrophy/epispadias	–	4
Diarrhoea	–	1
Hypospadias	–	21
Penile Trauma	–	1
Neonatal bowel obstruction	–	1
Disorder of sexual development	–	10
Urinary incontinence	–	2
Wilms tumour	–	2
Anorectal anomaly	–	2
Hydronephrosis	–	1
Hirschsprung	–	4
Neuroblastoma	–	1
Multicystic Dysplastic Kidney	–	2
Urinary tract calculi	–	2
Urethral rupture	–	1
Urethral prolapse	–	1
Peritonitis	–	1

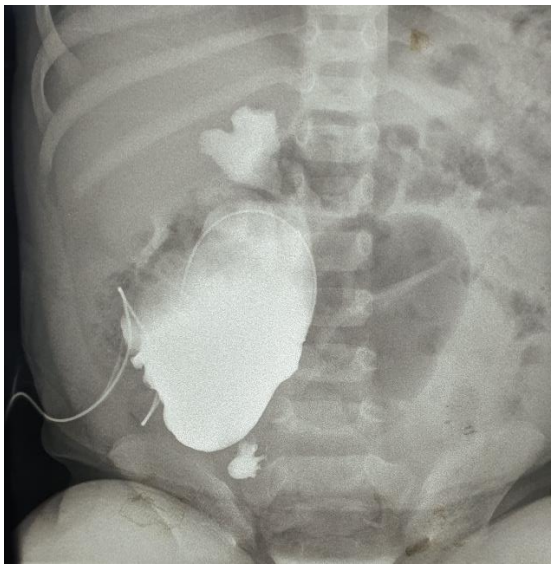
Operations included:

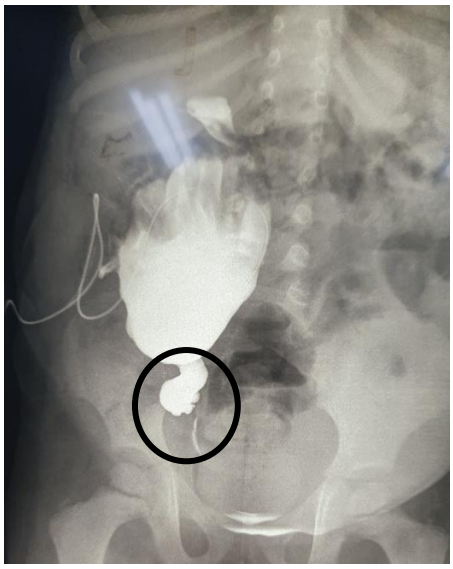
During this visit the list of procedures is not easy to tabulate. The 31 operations included cystoscopy, but with such a variety of operations that it would require a list of many different procedures, but significantly including the insertion of a nephrostomy tube in two patients, both with obstructed kidneys that needed drainage to facilitate further investigation (images below). One of which was performed under local anaesthetic in the ICU, because of the renal status precluding general anaesthesia.



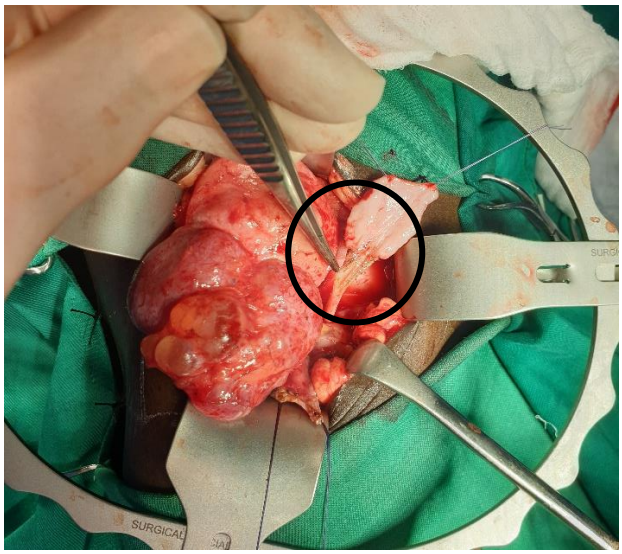
Case Study

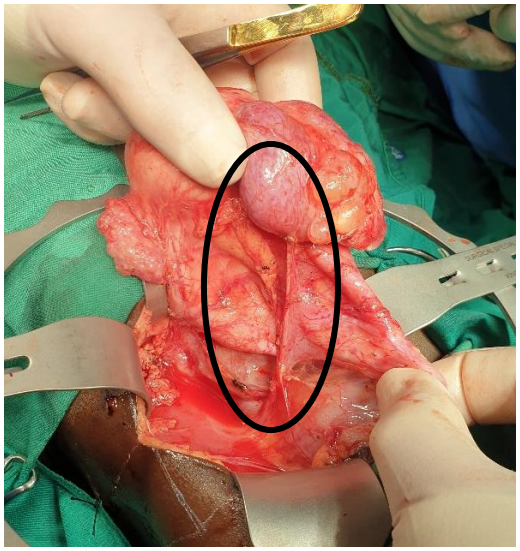
A three year old girl presented with an abdominal mass due to a dilated kidney that appeared to have a large ureter in the pelvis. That right kidney was her only kidney. The CT scan did not fully define the problem, so she had a nephrostomy tube inserted and contrast placed inside the kidney that showed a blockage part way down the ureter (circled), the understanding of which was improved by taking pictures in the lying (left) and standing position (right).



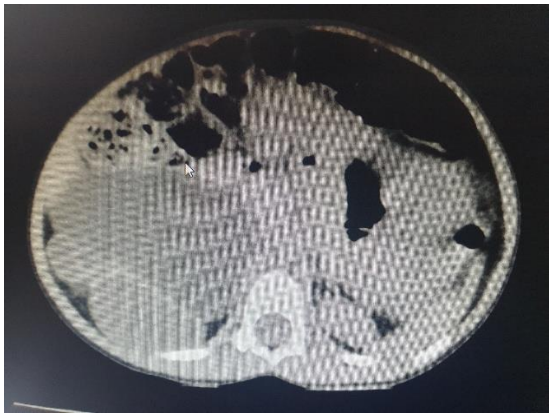


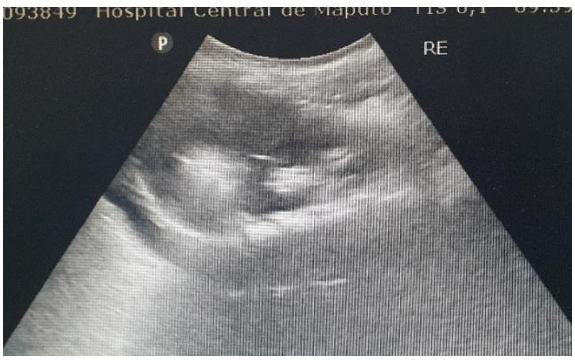
At exploration, she was found to have a variation of an abnormality that would normally not be compatible with life, namely the right kidney, as likely for the left, was a Multicystic Dysplastic Kidney, which results from loss of blood supply to the kidney before birth – loss of blood supply to the upper ureter contributes to the narrowing of the ureter seen in the Xray and on the image below (left); the "borrowed" blood supply from adjacent tissues in seen in the right hand figure.





The Pictures Tell the Story – The Patients





The Pictures Tell the Story – The Work