

Trip Report Kilimanjaro Christian Medical Centre, Tanzania, 2023

Mr Wilson To

Special thanks to Dr Samuel Mfuru and Dr Ashley Joseph Rapheal for their assistance for the collation of some of the data used in this report.

Introduction

In November 2023, I was part of a team of Urologists who took part in a reconstructive workshop at the Kilimanjaro Christian Medical Centre (KCMC) in the city of Moshi, Tanzania (Figure 1). I was a Urolink Fellow, and it was made possible with the generous support from The Urological Foundation.



Figure 1. Main entrance of Kilimanjaro Christian Medical Centre (KCMC) in the city of Moshi, Tanzania

Over the course of the workshop, we taught 70 delegates, and many more trainees and medical students informally. We carried out 19 surgical complex procedures on patients coming from a wide geographical area. All but 2 of the patients had had multiple previous unsuccessful intervention from their local healthcare providers, and the furthest distance they have travelled to our project was 1204km! This was because surgical care in general, and urology specifically, is an underdeveloped area in much of sub-Saharan African countries;

patients often have to travel great distances to access the quality of healthcare they need, if it is available at all. Further, the national gross income per capita average of Tanzania is just over 1000 U.S. dollars, making travelling and specialist healthcare prohibitively expensive in many cases.

The aim of the fellowship was knowledge transfer; to create sustainable improvement in the quality of care specifically in the areas of trauma and sexually transmitted diseases (STDs)-related urological diseases, and in paediatric urology. This was particularly pertinent, as the rate of accidents (road, mining and agricultural) and STDs are much higher than in Western countries. Furthermore, 22 of 26 Low Income Countries are in southern Africa. The demographic is distinct with children less than 14 years of age making up over 50% of the population.

This fellowship took place in November 2023. The project was divided into 2 halves; the first was to host the 14th J Lester Eshleman Workshop, and the second was to provide teaching and mentoring to the local medical students, residents and practising urological surgeons.

The core team consisted of Paul Anderson, Ram Subramaniam, David Dickerson, Steve Payne, Suzie Venn, and me.



Figure 1. Professor Rien Nijman, Professor Ramnath Subramaniam, Mr Wilson To, Mr David Dickerson, Mr Paul Anderson, Ms Suzie Venn, Mr Steve Pagne and Mr Jacques Bogdanowicz (L to R)

The Workshop

The workshop was attended by 70 delegates (30 urological surgeons and 40 residents), from 7 different African countries (Tanzania, Uganda, Kenya, Somalia, Ethiopia, Malawi, Gambia). The main themes of the workshop were adult urethral stricture (narrowing or obliteration of the waterpipe to allow normal passage of urine), and paediatric congenital urological abnormalities (children that were born with abnormal structure of the urinary system). At the beginning of each of the morning and afternoon sessions, the delegates were

presented with the clinical details of the patients to be operated on and took part in open floor discussions. This was followed by a lecture series (table 1).

Lecture Title	Presenter
Phil Thomas and his link to KCMC	Suzie Venn
Urolink, past present and future	Steve Payne
Urethral reconstruction	Steve Payne
Future advances in stricture management	David Dickerson
Penile cancer management	David Dickerson
Spina bifida management	Rien Nijman
Paediatric MDT	Ram Subramaniam
Peyronie's disease	Steve Payne
Perineal blast injuries	Paul Anderson
Fournier's gangrene	Paul Anderson
Undescended Testis	Wilson To
Differences in sexual development	Wilson To

Table 1. Lecture series

Live Surgery

All patients deemed suitable for consideration for live surgery during the course of the workshop were reviewed the day prior, with results of completed investigations being available at the bedside. They were all technically or diagnostically complex cases selected by the KCMC team prior to the visit and which had been agreed with the visiting team to be technically feasible within the context of the workshop. Overall, 18 adult and 8 paediatric patients were deemed acceptable for live surgery. 10 adult, and 9 paediatric, procedures (on 6 children) were demonstrated by live video link (Table 1 and 2), with the operating team and the audience engaging in live discussion via audiovisual link. 4 adult cases that had been scheduled for surgery were deferred due to a lack of operative time; this was mainly due to technical difficulties due to the complexity of the previous cases. Bulbo-prostatic anastomosis (BPA) is a key operative technique to treat urethral stricture; it restores continuity of the waterpipe from the penis to the bladder (where urine is normally stored). All BPA surgery carried out were technically difficult ones, being at the more severe end of the disease spectrum (stage 3 or 4). One patient suffered injury to their rectum during their operation and required their bowel to be brought out temporarily to allow healing.

Procedure	Number
Bulbo-prostatic anastomotic (BPA) urethroplasty following pelvic fracture disruption injury (PFUI)	4
Augmentation urethroplasty	1
Revision of penile urethral reconstruction	1
Revision of perineal urethrostomy	1
Endoscopy/EUA	3

Table 2. Adult operative procedures demonstrated during the workshop

Paediatric cases

9 paediatric procedures (on 6 children) were demonstrated during the workshop. 2 of the children had complications from prior circumcision; one of them had 2 fistulae (abnormal communications between the waterpipe and the skin) and appeared to have been a case of undiagnosed hypospadias variant (a rare form of congenital disease where the penis was not properly formed), and required a complex repair. The other had a penis that appeared buried, again appeared to be an unrecognised hypospadias and required an extensive procedure.

Procedure	Number
Orchidopexy	3
Mobilization of buried penis	1
1 st stage hypospadias repair with preputial graft	1
Closure of urethro-cutaneous fistula	1
Ureteric reimplantation	1
TIP distal hypospadias repair	1
Laparoscopy for DSD	1

Table 3. Paediatric operative procedures demonstrated during the workshop

For the first time for KCMC, a diagnostic laparoscopy (a key-hole procedure), was demonstrated in a paediatric patient with the aid of one of the local gynaecologists (figure 3). This was for a child with ambiguous male genitalia, and female pelvic organs were discovered during the procedure. This was therefore a case of Disorders of Sex Development (DSD), an entity that is commoner but having fewer management options in sub-Saharan African countries.

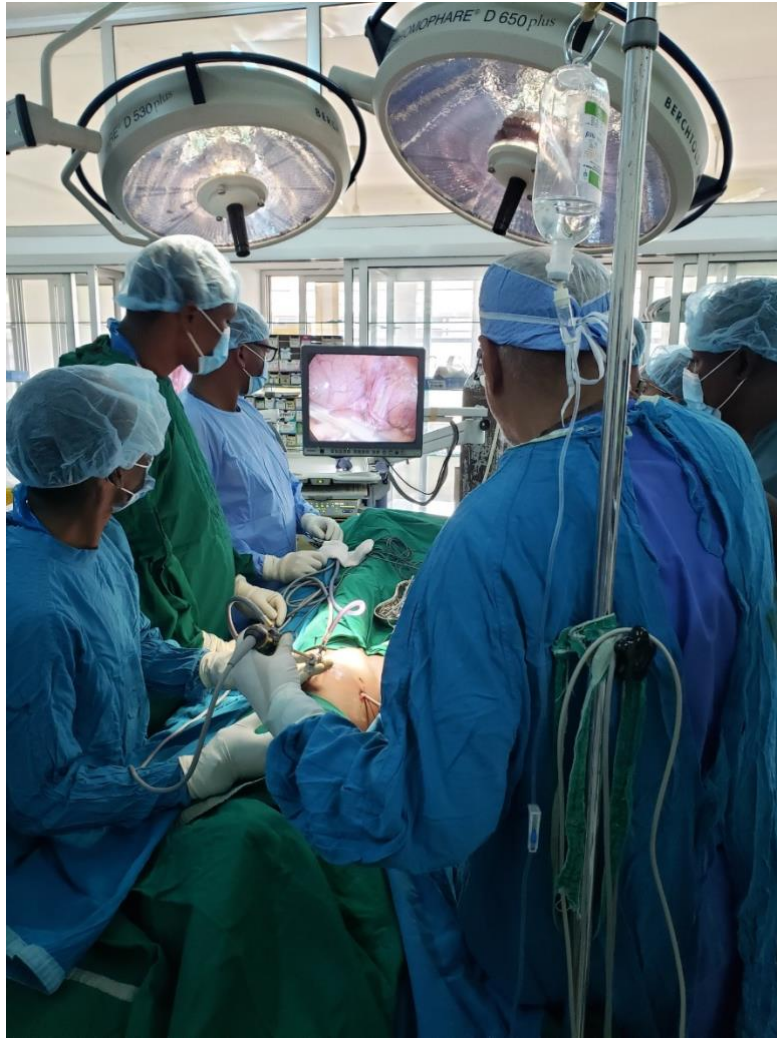


Figure 3. Mr Ramnath Subramaniam demonstrating the first paediatric key-hole procedure at KCMC with a captive audience.

Workshop feedback

86.6% of delegates rated the lecture series as being very good or excellent, and the majority of respondents (95%) felt that 'quite a lot' or 'a huge amount' of the knowledge acquired could be assimilated into clinical practice in their home environment. All respondents commended on the breadth of cases demonstrated, especially when faced with the technical challenges. 87% of respondents reported that they felt 'quite a lot' or 'a huge amount' of the knowledge gained during the live surgery session could be assimilated into their personal clinical practice.

Ms Suzie Venn and I stayed on for a further week at KCMC. Normally, healthy individuals are born with 2 kidneys. We saw a 3-year-old girl born with a single kidney, and the waterpipe draining the only functioning kidney had narrowed down causing her pain, recurrent infections, and kidney damage. For her, we demonstrated an open ureteric reimplantation (joining up the healthy portion of the waterpipe from the kidney to the bladder). We further demonstrated 2 orchidopexies (bringing malpositioned testicles to their normal position in the scrotum) in 2 paediatric patients to the local urologists and residents. In addition, we carried out daily teaching during morning ward rounds, as well as discussing

cases with the local urologists and trainees in outpatient clinics. We also held strategic meetings with the KCMC management team regarding future collaboration.

Conclusion

We achieved an incredible amount thanks to the generous support from the Urological Foundation, MEDIGIVE, and the faculty members giving up their free time to support this project. We witnessed so much enthusiasm, talent and dedication from the delegates from all over sub-Saharan Africa. We were heartened to receive such excellent feedback from them, and were extremely grateful to the patients and their relatives for giving us their permission to be treated during our project.

If you are interested in finding out more about our work, please do not hesitate to contact me directly by email (wilsonto@doctors.org.uk), or visit the Urolink website (https://www.baus.org.uk/professionals/urolink/urolink_home.aspx).