

Urology Bootcamp 2022

Kisiizi - Uganda

On behalf of Urolink - BAUS

With Special thanks to The Urology Foundation

<https://www.theurologyfoundation.org/>

Mr Simon Huf



Endoscopic bladder outflow Bootcamp Report for Urolink (BAUS): *Kisiizi Hospital, Uganda*



Objectives of the camp

Our objectives are to travel to rural Uganda and provide a training camp to local surgeons to run benign bladder outflow surgery. We aimed to achieve this by travelling in a group of four surgeons and run endoscopic surgery supervised training theatre lists in Kisiizi Hospital. Standard TURP surgery techniques performed on selected patients during camp. Local surgeons underwent training on patient selection, pre-operative investigation requirements, surgical technique, post operative management and complications.

1.0 Kisiizi Hospital charity, Uganda

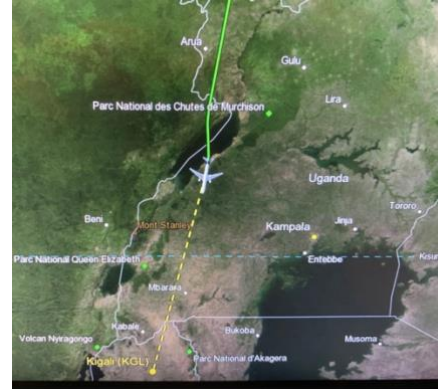
Kisiizi Hospital is situated in the Southwest of Uganda and covers a large geographical catchment area. It is home to a regional school of nursing. The Hospital has a 250-bed capacity. The hospital is non-government run and therefore 'fee paying', any fees paid by patients or



families account for between 15-40% of the cost of treatment. The hospital charity runs local sustainable businesses that have been set up since its founding in 1958. There are two resident specialist general surgeons and junior doctors in training. The hospital surgeons receive sub-specialty training and camps on regular basis by visiting specialty teams.

2.0 Getting to Kisiizi Hospital, Uganda

Flights depart from the UK via London Kampala (Uganda) through Brussels via Kigali (Rwanda). This route was challenging due to covid pandemic and individual travel restrictions and criteria on each leg of the journey. International airports were more reliable as transit and meeting covid rules opposed to more



direct flight and the need to cross more unreliable and borders. From Kampala the team took an internal transfer via bus to Kisiizi (380km 7hr trip). Travel requirements included covid vaccination & negative covid tests from official test centers, yellow fever vaccinations and travel Visa

\$50 to travel. Upon arrival we stayed in guest accommodation provided by the hospital charity. We were generously provided with local cuisine three times per day by the hospital which was an incredible experience.

Costs included, flights, visas, accommodation, airport transfer shuttle buses and were supported by The Urology Foundation

<http://www.theurologyfoundation.org> and Urolink (BAUS.org.uk). Surgical supplies and support were also donated with thanks to Royal Berkshire Hospital & charity.



3.0 Bootcamp preparation

The Kisiizi Hospital Urolink has been running for over 10 years and usually welcomes urologists twice per year to help offer urology training to local surgeons and surgery to the west region of Rukungiri, Uganda.



With the help of UK urologists and Kisiizi charity, local surgeons have been learning endoscopic bladder outflow surgery under supervision. Local surgeons spend 1-2 years onsite and rotate onwards thereafter. The Urolink camp offers local surgeons the ability to learn bladder outflow surgery under supervision. The camp is supervised and helped organized by resident chief surgeon on site.

Due to covid restrictions the camp and urology surgery was not performed in over two years and our trip was the first to visit and restart training for local surgeons.

Due to the equipment and resource requirements of endoscopic bladder outflow surgery, this required preparation by both visiting surgeons and local surgeons.

The functionality & safety of previously acquired and set up TURP equipment on site was unknown. This has largely been run by UK visiting urologists. In order to run the surgery training camp, we brought additional supplies of resectoscope equipment,



diathermy & monopolar back up equipment, as well as specialist three-way catheter and giving sets.

4.0 Local Hospital bootcamp preparation

Patients had been seen in clinics in the months leading up to the bootcamp and put on waiting lists for bladder outflow surgery by local surgeons. The majority of these were catheter dependent. Due to high cost of glycine irrigation fluid, sterile water was used during the camp. Large volumes of sterile water were distilled onsite for 6 months and stored securely leading up to the camp.



Local carpenters had created moveable wooden endoscopic stacks to house monitor, diathermy, and light source equipment. These were of great benefit to facilitate safe use, storage and transport of endoscopic equipment.

5.0 Preoperative clinics

Upon arrival on Sunday evening, triage was performed on patient who had been pre-selected from the region. These patients were reviewed and allocated to theatre lists for the bootcamp week. Triage of medical history and examination with the help of local surgeons as translators was performed. Further tests including PSA blood tests, flow rates and rectal examinations were performed. Suitable patients were consented and booked on theatre lists for TURP surgery. Of the 33 patients operated on patients with clinical diagnosis of prostate cancer had been offered alternate surgery (sub capsular orchidectomy). Two of these patients had previously had transrectal biopsies of prostate with high grade prostate cancer detected.

Clinic triage was organized by junior ward surgeons who helped with note taking, consent and management plans. Training of local surgeons was run in parallel to clinic. Patients stayed on wards and relatives stayed in hospital



provided accommodation in relatives' camp. This is to help the hospital with peri-operative management of attend to and assist in management of patients on ward. This included basic care requirements of feeding the patients as well as topping up irrigation fluid in the post operative setting.

6.0 Operating theatre

During the boot camp two parallel theatres were used for five days. Two visiting surgeons supervised local surgeons in training TURP surgery. All operations were performed under spinal anesthesia by trainee anesthetic practitioners supervised by one anesthetist who was overseeing four operating theatres.



Summary of all spinal operations performed:

Total of 33 cases	Of 33 Case numbers:
Transurethral Resection of prostate (TURP)	25
Transvesicle prostatectomy	4 (based on clinical assessment – transabdominal ultrasound of bladder (estimate >250, of which 300-400 cc in 2 patients))
Urethral dilatation (guidewire & S dilators)	7
Sub-capsular orchidectomy	4
Perineal urethrostomy	1

Surgical pitfalls & complications

Operating in new or unfamiliar environments can create challenging situations in any hospital. Given the circumstances of limited equipment and resources available, all equipment had to be looked after, adequately sterilized and accounted for in-between each case. Additionally due to one faulty light lead we had to rely on one single stork set up for one theatre without back up and one Olympus TURP set up without back up in the other theatre. This required meticulous care of the equipment available.

Sterilization

In between each case, all equipment was manually sterilized in sterilization tank which was more fondly renamed the 'soup bucket'. We were pleased to hear that no patients required re-admission following surgery. Surgical draping and gowns relies on steam cleaning gowns and drapes and the re-use of materials. Due to the high turnover during the boot camp most drapes and gowns were 'hot off the press' or 'steamer'.



Irrigation fluid & equipment degradation

Due to the use of distilled water in place of more commonly used glycine in developed countries, the energy transfer is reduced and therefore cutting, and diathermy reduced. This results in faster degrading of resection loops. Satisfactory resection and TURP cavities however is still achieved. Additional resection loops were on standby and replaced after breakage.

Running out of irrigation fluid

Due to the fast turnover and volume of TURPs performed, despite all pre-planning the hospital ran out of distilled irrigation fluid mid-week. The theatre operations manager identified this and began around the clock distillation of sterile water to ensure we could complete the camp.



Furthermore, due to reduced energy transfer to tissue, more extensive diathermy was required to ensure that adequate bleeding control was achieved. No patients required return to theatre and one patient required conservative management with catheter traction. One patient who underwent open prostatectomy for 380g prostate required 3 units blood transfusion and despite this was successfully discharged 7 days post operatively.

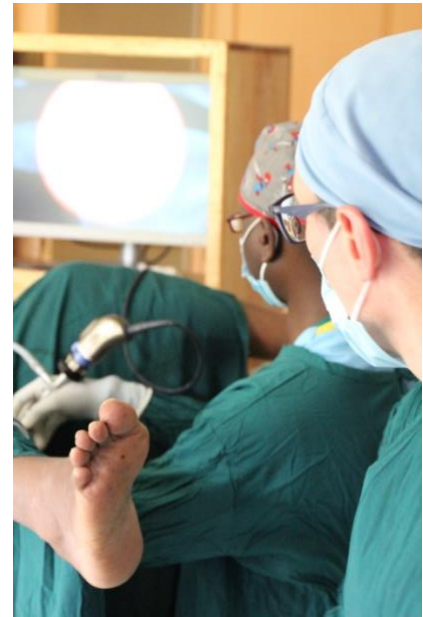
Power outage

The hospital is in a unique location near a fast-running stream and has the benefit of hydroelectric power plant. This maintains the hospitals electricity supply and sustains it at significantly reduced costs. Despite this there were occasional power outages which required prompt response, catheter insertion, irrigation & traction intraoperatively. After power was restored, the operations were completed.

We were pleased that all patients were successfully discharged within 5 days post operatively.

6.0 Teaching & sustainability

We had the privilege to operate with exceptionally well-trained local surgeons. Dr Paul as lead ensured that his trainees were well versed in theory of urology bladder outflow surgery, including surgical work up including investigations and technical aspects of surgery. This enabled learning curves to be significantly shortened and local trainee surgeons were operating independently by the end of the bootcamp.



Although local trainees rotate to other regions, they take endoscopic skill set acquired with them in their training. This will no doubt facilitate future development of their urological operative and diagnostic skills.

In total one resident lead surgeon was present; three local trainee general surgeons were taught as well as three local house officer surgical trainees attended the urology boot camp.

Since returning from bootcamp we have maintained our link with these surgical trainees and are assisting them with further educational needs to further their urological knowledge.

Due to endoscopic stack set up – laparoscopic surgeons from Kampala have since visited Kisiizi Hospital and performed their first general surgical endoscopy procedures. This opens up new avenues



for the region to safely develop minimally invasive surgery for people of the southwest of Uganda.

We plan to return to Kisiizi more regularly post covid pandemic and will be booking next TURP boot camps later for this year. We hope to build on our recent camp and strengthen our Urolink with the hospital by training more local surgeons in endoscopic procedures.



7.0 The Kisiizi Experience

Smiles, hardship, sustainability, hard work, faith

On a personal note, we were humbled by the open arms approach to our recent urology camp. It was tough to hear the devastating effect of the recent global covid pandemic and how this had impacted Kisiizi Hospital and the region. As the first specialist team to have returned we saw the hardships experienced. Due to the pandemic many of the patients had been waiting for up to two years for their surgery.

By providing evening teaching to local surgeons, we were able to help build on urology knowledge and skills. It was a privilege to be part of the urology team from the Royal Berkshire Hospital to restart urology camps in Kisiizi following the pandemic and ensure that urology training can continue in the region. Future camps will look at assessing patient flow and begin regular audits of trips to ensure that adequate equipment and irrigation fluid is prepared. The end goal would be to train our local colleagues to be confident in offering bladder outflow surgery with endoscopic approach.

This experience was eye opening and invaluable as a senior urology trainee. This has helped shape my future practice as a future consultant. It is possible to safely perform advanced endoscopic urology operations in developing country with appropriate support and training. There is some way to go to develop this service to sustain regular endoscopic

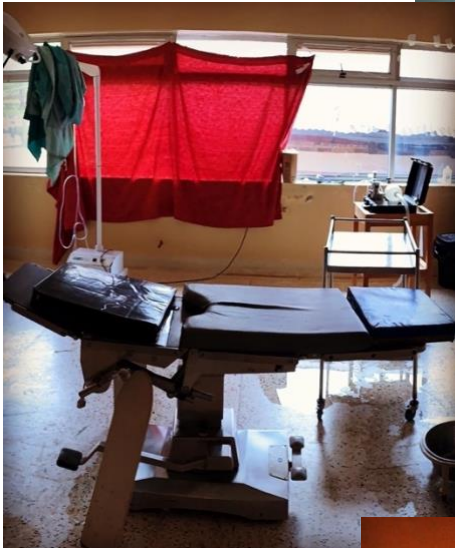


operating in this southwest region. I hope that this will be my first of many visits to both Uganda and other developing countries to help support other urology units.

8.0 Thank you

We would like to thank Kisiizi Hospital and its staff for welcoming us and working tirelessly to run the urology camp. In particular Dr Paul, who coordinated efforts locally. Dr Paul runs an outstanding surgical practice which covers many subspecialties in is region. He ensures the highest levels of practice achieved and works extremely hard in ensuring he achieves excellent outcomes.

Furthermore, we thank the Royal Berkshire Hospital for its support on the trip and finally we would like to thank The Urology Foundation (<http://www.theurologyfoundation.org>) who supported our trip financially and help sustain this and future training in developing countries.



***Thank you Kisiizi, ...Thank you to
The Urology Foundation!***