

Report on a visit to Kilimanjaro Christian Medical Centre, Moshi 15th May-9th June 2006

Urology in Tanzania - a rewarding experience

Kilimanjaro Christian Medical Centre (KCMC) is a 450 bed tertiary referral centre on the outskirts of Moshi, Tanzania.



The Institute of Urology, located on the KCMC campus is the only institution of its kind for a regional population of 100 million people. The urology department is lead by 2 consultants: Dr Mbwambo and Dr Mteta who work both at KCMC as well as peripheral hospitals. Being one of the speciality training Institutes of the Association of Surgeons of East Africa, the department has trained Urologists from Tanzania, Kenya, Uganda, Zanzibar, Zambia, Madagascar and Ethiopia, as well as welcoming consultants and trainees from Europe and Australia.

The urology department at KCMC consists of a 31 bed unit (28 male and 3 female). Children with urological conditions are managed immediately post-operatively on the urology ward before being transferred to the paediatric ward for ongoing care.



The objectives of my visit were threefold: to create a computer database to record work load in the urology theatre, to gain overseas urological experience and to teach.

Computer database

Prior to my visit there were no electronic records of theatre workload and no formal documentation of patient complications other than in individual case notes. This had created numerous issues. Operating theatres had no definitive idea of case numbers and case mix negating the ability to plan and appropriately allocate both material and human resources. Absence of monitoring also meant that surgeons had no formal record of their workload or complication rates, hampering the creation of personal portfolios, educational goals and research. In addition to this, in the future, International aid organisations and foreign governments are likely to use information based on case numbers and case mix when considering grants for hospitals such as KCMC. Thus the development of a system to monitor workload is likely to bring many benefits to the unit.

On my arrival, I realised that I had under estimated the department. I was greeted with enthusiasm regarding the creation of the database and shown to an office with a computer with Microsoft XP 2003 software. I subsequently met the 4 workers in the hospital IT department (with at least 5 computers in their office).

Theatre already had a notebook to record operations. The information recorded was limited and after discussion with Dr Mteta, we decided to expand the information collected to include “duration of surgery”, “grade of surgeon”, “surgical complications” and “anaesthetic complications”. I created a ward complications notebook to record any patient adverse events during their stay. Subsequently I designed the theatre database using Microsoft access and internationally recognised diagnosis and operation codes (ICD10 AND OPCS4 respectively) to ensure standardisation within the database. As an example of the completed database, I inputted all the operation details for May and created example queries and reports. I then recruited a computer technician (Mark Denning – a local worker from Moshi) and taught him how to classify and input the data, as well as how to save the information. Patients returning to clinic with complications will have these recorded in the ward complications book and the information will be added to each patient report in the database in retrospect. In the future, the system has the potential to be expanded to include ward and outpatient workload monitoring.

Teaching

During my visit I taught interns informally as well as teaching basic computer skills to one of the theatre sisters. This was an extremely rewarding experience. I also donated a variety of teaching materials, both paper and electronic, to aid future trainees learning.

Clinical experience

The third aim of my visit was to experience urology in a different culture with completely different resources. The breadth and extent of pathology presenting to KCMC dwarfs that of a similar sized UK department. As well as seeing many patients with pathology similar to that in the UK, I also experienced a range of conditions unique to Africa. This taught me how to manage conditions that I have already managed in the UK, in a different way, and also how to manage rarer conditions- an experience which I could not gain in the UK.

On an every day basis the routine was similar to the UK. The ward round started at precisely 7.30 am. After the ward round, as in the UK, the intern did ward work but was encouraged to come to theatre for rarer cases. The residents then either went to clinic (where they could see up to 60 patients per clinic) or to minor ops, TRUS lists or main theatre. There were generally 3-4 cases per list, e.g. TURP, urethroscopy and cystoscopy, TURP, dilation of urethral stricture, but, also, compared to the UK, a higher proportion of open cases. I assisted at a wide variety of cases including ureterolithotomy, open prostatectomy, Duckett’s hypospadias repair and urethroplasty. I also assisted in an attempted cystectomy and Mainz 2 pouch for a 27 year old girl with squamous cell carcinoma of bladder and a past history of schistosomiasis. Sadly the procedure was abandoned when we discovered that she had disseminated metastasis.

Endoscopic equipment has revolutionised Urology in Tanzania, however, technology comes at a cost, not only initial pay out, but also for repairs. During my visit the department had 1 fully functioning 0° scope and 1 fully functional 30° degree scope. Although there was one spare 0° and 30° scope I was informed that these were not working “well”. The functioning scopes therefore had to be cleaned with “Cidex” between cases.



The camera had also been broken for approximately 3 months and not yet returned from being repaired. This therefore severely affected the training of the residents. To cut costs, irrigation fluid is manufactured on site. 5% dextrose is used and anecdotally there is a higher rate of TUR syndrome. The higher incidence of TUR syndrome may also be because of prolonged operating time due to the use of non-continuous irrigation.



Financial constraints were visible on the ward round every day. A vomiting elderly man with urinary sepsis was unable to afford IV antibiotics and was thus prescribed oral antibiotics which he vomited. Over the course of a few days he deteriorated and was discharged. A 16 yr old boy with metastatic rhabdomyosarcoma of the testis presented with an abdominal mass. He was unable to afford a CT scan for staging and instead simply had a chest x-ray before commencing chemotherapy. A 12 year old boy who had presented with possible lymphoma of the bladder remained on the ward during my entire stay. His parents had abandoned him as they could not afford any potential treatment. Simply giving money would have helped these individuals. This left me with huge ethical dilemmas.

Advice

- Think clearly about what you want to gain from your visit and how you can make the visit benefit the overseas department. I feel strongly that the visit should not compromise the training of the local trainees who, for example in KCMC, have a relatively short time to gain clinical skills prior to returning to their region or country of origin where they often work unassisted.
- Carefully consider whether you go to a tertiary referral centre, regional or district hospital as the work you will have to do and the skills you need will vary enormously.
- Find out what donations are most needed to avoid carrying kit which will not be used. For example ET tubes are reused at KCMC, they are light weight and easy to carry and thus good to donate.
- Have appropriate vaccinations and arrange HIV post exposure prophylaxis (PEP) to take with you if necessary.
- Find out as much as possible about the hospital before you go, via email, internet and from other trainees who have visited.
- Things don't always run smoothly or as expected!

Conclusion

It was a privilege to work with such a dedicated, skilled and forward-looking team in this developing country. The consultants realise the importance of sustainable development and appropriate training and are striving to work in an environment that lacks resources to make their ideals easily attainable. So, what is the future?



The department has a reputation across East Africa and is thus in the process of expanding with the building of another theatre. In September 2006 the department will offer the Masters in Medicine in Urology, a four year training program in urology for doctors who have already done 1 year in general surgery. This new programme aims to increase the numbers of trained urologist in East Africa and will be similar to the American and proposed UK Core/Office urologists system.

Overall, this visit was of great benefit to my own training, and I hope that the computer database and donated teaching materials will aid the training of future residents at KCMC as well as the ongoing development of the Urology Institute.



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