GDMP3109 Elective Report

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Original objectives: An elective that is primarily experiential in nature. Observing and assisting doctors and nurses at Kalene Mission Hospital in Zambia. I aim to gain experience in medicine, surgery, paediatrics and obstetrics with particular interest in surgery and tropical medicine.

Kalene Mission Hospital is a 180 bed hospital located in the North-Western province of Zambia, one of the most remote regions in of the country. It is primarily inhabited by people belonging to the Lunda tribe, living primarily by subsistence farming. The hospital is located 30km from the borders of both Angola and the Democratic Republic of the Congo. In order to get to the hospital I could choose from a 2-3 day bus ride (depending on the state of the roads) or a 3 hour flight. Needless to say I arrived via plane. The hospital is run by Dr John Woodfield, a colorectal surgeon from New Zealand. He is supported by visiting doctors from the UK, US, Canada, Australia and New Zealand. For the first month of my rotation he was by himself. For the final month he was supported by two final year registrars from the UK, one, training in anaesthetics and another, training in obstetrics and gynaecology.

For my first month I ran the men's ward, which involved running ward rounds and identifying patients needing review by Dr Woodfield, clerking in new patients, ordering investigations and fixing any problems arising on the ward. Typically the ward would have anywhere between 25-30 patients at any time. Conditions ranged from malaria, TB and complications of HIV/AIDS through to things more commonly seen back home such as diabetes, heart failure, strokes (although usually haemorrhagic rather than ischemic), and cancers. I was also first on-call overnight 3-4 nights per week, which meant being called in to review deteriorating patients and to review all new admissions received overnight.

It became immediately obvious that practicing medicine in Zambia is completely different to medicine back home. Most of the issues revolve around providing medical services in such a remote environment and with very limited funding. Firstly, the language barrier is a huge problem. All patients need to be seen with a Lunda translator and for some patients (such as those coming over the border from the Congo and Angola) the consultation is translated from English to Lunda and then into a third language. Most of the people doing the translation were nurses, however at times we had to use patients from neighbouring beds in order to translate. Obviously this created multiple issues including confidentiality and accuracy of translation. Compared to back home where professional translators are available, albeit with difficulty, the complete lack of translation service made the job much harder. I did manage to learn some Lunda such as mashika means fever, kusanza means vomiting. This made the job a little easier, however it was pretty much impossible to

take a comprehensive history as we would back home. The lack of investigations available was a shock. In terms of blood tests, we could order full blood count, ESR and creatinine. Pregnancy tests were urine tests (no beta HCG levels available), X-ray was available using a mobile machine only, ultrasound was available but there were no sonographers available meaning you had to do the scan yourself. For infectious diseases we could order urine, stool and CSF microscopy, sputum cultures were available for TB. Rapid bedside tests were available for malaria and HIV. The hospital had a CD4 count machine, but it was functional for 1 out of the 8 weeks I was there. With the difficulties taking histories and lack of investigations, you really had to rely on your clinical examination skills to make the diagnosis.

On my first day running the ward a man was brought in unresponsive. He had been in a fight and had apparently received a blow to the head. After an initial panic I remembered back to a lecture on trauma management and started working my way through the ABCs. By the end of my initial assessment I realised that he was afebrile, normotensive, his heart rate and respiratory rate were normal and his pupils were reactive. He had no obvious external signs of head injury. He was however, completely unresponsive even to pain. His random glucose was normal and a more thorough physical examination did not reveal any obvious cause for the presentation. It was only upon looking in his mouth for any clues that I smelt the unmistakable stench of alcohol. As it turned out this guy was just drunk and feeling sorry for himself after losing a fight, so he was just putting on a big act. By the time Dr Woodfield came to review the man, I had already assessed, diagnosed and started treatment. It was experiences like this that made the elective what it was, being forced to rely on my clinical knowledge and put into practice, things that had been learned over the last three years.

Another interesting clinical experience was being called in at 3am to review a new patient who had just been admitted. She presented with PV bleeding and after taking a history I believed it was most likely to be a miscarriage. I performed a clinical examination including PV examination and felt a palpable uterus and saw that her cervix was open, I was able to perform an ultrasound to confirm that the foetus was still in utero, however I was able to determine that there was no foetal heartbeat and was able to diagnose her with an inevitable miscarriage. Although it was a horrible experience for the patient it was nice for me to know that I was able to competently assess her, correctly diagnose her and confidently report my findings to the doctor on call, who helped me to develop an appropriate management plan. It was nice to know that although the patient was in the middle of the African bush, she was able to access safe and effective medical care that was in line with what she would be able to access in most hospitals in the western world.

Tuesdays and Thursdays every week were operating days. These days would typically consist of 10-15 cases per day split between a theatre and procedure room, and would be carried out by one or two of the doctors. The types of cases would vary depending on which doctors were around and whether the anaesthetics registrar was present to do a general anaesthetic, however while I was there we did everything from a simple lipoma removal through to the removal of an ovarian tumour the size of a rugby ball, hysterectomy, bowel resection, prostatectomy and hernia repairs. The majority of the cases were carried out under ketamine, local anaesthetic or spinal

anaesthetic, however for the bigger cases, general anaesthetics were possible. A common operation was a bilateral tubal ligation (BTL). Reasons for this included this being the only real option for long term contraception available to women and it being culturally uncommon for men to have vasectomies (the hospital does 150 BTL operations a year and one vasectomy a year). I became quite proficient at performing BTLs and by the end of my time I was able to perform them start to finish by myself. I had expected to spend most of my time observing and assisting on a couple of surgeries when I went to Kalene, so it was great to get to learn to do a few procedures and to have the supervision in order to carry them out myself. This was one of the great highlights of my elective, the opportunity to develop skills that I wouldn't get the chance to develop for a number of years.

During my time at the hospital, I spent some time in the maternity ward. This resulted in me assisting in a number of caesareans and delivering a baby. It was an amazing experience, considering that during my obstetrics term in Sydney, despite making every effort, I was only able to observe one normal vaginal delivery. It was an experience typical of my time at the hospital. Normally in Sydney, it is a struggle to get any hands on experience, however at Kalene it seemed that people were more than happy to supervise me to do things that I would never get the opportunity to do back home.

On childrens ward we had a child with massive lymphadenopathy which was found to be lymphoma similar to Burkitt's lymphoma. I was given the job of administering his chemotherapy regimen. He responded really well to the chemotherapy and in the time I was there, his lymphadenopathy reduced from being so large it affected his ability to move his neck, down to being barely palpable on examination. Again it was great to be involved at all stages of management. So often back home we are taken to see patients and are told for example 'he has Burkitt's lymphoma and he is on these chemotherapy agents'. It was a really refreshing change to be involved in the diagnosis of the condition, the choice of management and the actual provision of care rather than viewing everything as an outsider.

Once a week the hospital would send out a team to a rural health clinic to help assess clinical problems and also to perform diagnostic testing as part of the hospitals HIV work. As the hospital is in a remote condition, you can imagine that these 'rural' clinics are as remote as you can get. They are typically a single building staffed only by nurses, they can deal with the vast majority of problems that come in, but typically once or twice a week they need to transfer some patients to the hospital.

Attached to Kalene hospital is the Kalene School of Nursing. Students study a two year course in order to qualify and Zambian Enrolled Nurses (ZEN). During my time at the hospital I spent one or two afternoons per week running tutorials for the nursing students. The students do cover most of the basics as part of their course, but I found that a lot of the nurses working at the hospital lacked the ability to put information together in order to come up with a differential diagnosis. Although the ability to diagnose patients may not be part of the traditional job description of nurses back home, due to the lack of doctors in Zambia, it becomes the job of nurses to diagnose and treat a lot of the less complicated cases. As part of my tutorials I took the nursing students through conditions such as heart failure, tuberculosis, asthma and malaria. I

also taught them how to perform cardiovascular, respiratory, abdominal and lymph node examinations. We ran through how to assess the acutely unwell patient and tried to get them to understand why vital signs are important and how to interpret vital signs in order to determine the severity of a patient's condition. I really enjoyed the teaching experience and it helped me to realise that it is something I would like to do more of as I progress through my medical career. Not only was it great to know that I was helping these students to become better nurses and to help them better care for their patients, but it also helped me to consolidate a lot of my learning from my training and some of the lessons I learned while at Kalene.

On arrival at Kalene I expected to primarily observe the work of the doctors and nurses in much the same way that I would back in Sydney. I was very pleased to find that I was able to be fully involved with the assessment and management of patients . This experience really pushed me to develop my clinical and surgical skills and to get a picture of what it is like to really work as part of a clinical team rather than to just observe from the outside. I felt like I was contributing to the running of the hospital and to the management of the patients. As my original objectives stated, this was to be a primarily experiential elective and I feel as if I had an amazing experience. I learned so much, particularly about diseases that are not commonly seen in Australia such as malaria, tuberculosis, leprosy and other tropical diseases. I also had an amazing experience surgically, assisting and performing surgeries that I would not get the chance to assist on back home. This really helped me to develop skills such as suturing and tissue dissection, which I know will stand me in good stead when I start working next year. It is hard to think of things that I would do differently if I had my time again, perhaps I would have stayed longer than 8 weeks. It took around 6 weeks to really find my feet there and to be useful, perhaps a period of 10-12 weeks would have been better.

In terms of learning, it might have been useful to do more pre-reading about things like malaria and tuberculosis. Although I understood how the disease worked and some of the symptoms, I found that it took me a while to really grasp the practical aspects of diagnosing and treating these diseases. I felt like I knew most of the medications we were using, but I was a little unclear on the protocols for treatment. It would have been good to really be up to speed on the exact protocols before I went over, because it was coming to terms with these things that really helped me to find my feet at the hospital and I feel that familiarity with these diseases would have helped me to adjust much more quickly.

In all the elective experience was a hugely positive experience. As my learning objectives were quite basic and straightforward, I had no problems meeting them. I had a number of really positive experiences at the hospital and in my time travelling through Africa. I learned a lot medically, and also about myself. This experience has really confirmed to me that I do want to work as a doctor and has really validated the work I have done up until this point. I have very few reservations about my time at Kalene and would recommend this as an elective for anyone who was interested. I will definitely be returning to Africa to work at some point in the future.

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