

Initial Impressions: Some thoughts after three months at Kalene Hospital, North Western Province, Zambia

John Woodfield, August 2007

The setting of Kalene Hospital

Kalene Hospital is situated in the North West corner of Zambia, close to the Democratic Republic of the Congo (DRC) and Angola and near the origin of the Zambezi River. Being in a peripheral corner of each country, resource allocation to this area has been limited. The medical needs can be illustrated by the infant mortality rates, which are approximately 100 per 1,000 births in Zambia, 130 per 1,000 births in the DRC and 185 per 1,000 births in Angola. The hospital has the potential to make a significant difference to the health care of many people in this particularly needy corner of the world.

At times it seems that we are ‘on the edge [or perhaps beyond the edge] of the modern medical world’. Zambia has a health system which partly works: staff are paid, HIV and Tb medications are provided, and some provisions arrive on time. In Angola and DRC (both countries that have not recovered from civil wars) there is almost nothing. I have yet to find out where the closest ‘good hospital’ is in either of these countries. People often come many hundred miles, some having not seen any doctor, often with advanced disease, as they have no where else to go (perhaps if they had money they may have seen a doctor, but a functioning hospital is a different proposition). For example Daniel, who was 30 days old had passed no bowel motion for 28 days, when he was brought 300 miles from Angola to Kalene. The journey was helped by the father having access to a motorbike. Raymond Allen, a visiting anaesthetist, was here enabling us operate the next day after a period of intravenous rehydration.



Joesphine, a mother of 25, had a seizure and fell into a fire with her 14 month child Mujinga, burning both her arms ‘down to the bone’. After 11 days of receiving various remedies and traditional care in the DRC she arrived, but tragically there was no option but to amputate both hands. Mujinga was more fortunate, and is making a good recovery with the assistance of a series of skin grafts.



Anything may happen – and it does!

First days – “hepatitis”, rabies, leprosy, breast cancer, uterine rupture

In this setting it is not surprising that ‘almost anything is possible’. Here is a sample from our first month. Four patients presented with a fulminant hepatitis and all died within 24 hours. There were some features that suggested a haemorrhagic viral infection, probably coming from an animal source, but not being readily spread from human to human. We contacted the Center for Disease Control (CDC), but they never replied!

A boy presented with rabies. We sedated him and made him comfortable. His relatives then decided it would be best for him to die at home. The next thing we heard was that the relatives had severely beaten an elderly lady in a nearby village as a witch doctor had ‘divined’ that she was responsible for the boy’s death (we may pick up this theme on another occasion).

A case of multibacillary leprosy presented, minus one toe and with palpable peripheral nerves, thinning of the eyebrows and multiple depigmented anaesthetic areas on the trunk. Our request for appropriate medicines was followed up by a visit from Zambian health officials who told us that they are very interested in cases of leprosy as following a period when it had been determined that the disease was ‘no longer present in Zambia’ a number of cases had recently been diagnosed.

My first operation here was for a fungating breast cancer which was over 16cm in size. Most breast cancers are advanced at presentation as there is a cultural stigma (much more significant than in New Zealand), associated with losing the breast. On my first night on call I was called to theatre at 03:00am to operate on a patient who had been brought into the hospital with a uterine rupture (we pick up this theme later).

I am still fascinated by the number of paralyzed patients who are brought into the hospital unable to walk, and leave the hospital walking following treatment of their CNS tuberculosis, and in another case following treatment of neurosyphilis.

Most common problems

The most important/frequent problems could be grouped into six categories: malaria, tuberculosis, HIV, other childhood respiratory complaints, Obstetric and gynaecological problems and surgical problems.

Malaria. The hospital's work in the area of malaria is discussed in the July 2007 edition of National Geographic magazine in its article "Bedlam in the Blood". Malaria in Kalene is not as bad as other parts of the country because we are at a higher altitude, but it is endemic in the surrounding areas with a surge of admissions to the paediatric ward following the commencement of the wet season. Although the National Geographic article, which was based on a visit two years ago, understates the actual resources of the hospital, it does give an accurate description of the fight against malaria.

TB & HIV/AIDS. Comments about TB and HIV will be saved to later. Both areas are helped hugely by donor and government funds which give a good supply of medications. However there are significant issues around the areas of patient counseling and adherence that we need to work on if we are to prevent the development of super-resistant HIV in this area.

Surgery. On the surgical front there is no shortage of 'very general' surgery. The range of work includes paediatric and adult hernias, a range of 'typical general surgery' including some bowel resections, thyroid surgery and gastric cancer, congenital problems (club feet, cleft lip and some GI cases including imperforate anus and Hirschsprings), prostate surgery, burns and trauma and acute orthopaedics (osteomyelitis, septic arthritis of the hip, fracture manipulations).

A closer look at Obstetrics and Gynaecology

Sub-Saharan Africa could be seen as a 'dream job' for any manic O&G specialist. There is a full range of obstetric work, the need to set up well planned antenatal care programs and gynecological screening programs, issues with infertility treatment (in some tribes being barren brings a curse on the family) and lots of gynecological (cervical, uterine, ovarian) cancer.

At Kalene there are approximately 1000 deliveries a year. Last year the LUCS rate was 12%. Half the women coming to the hospital to deliver attend the antenatal clinic. The other half turn up often after being in labour for a day. Some have been pushing for hours when the cervix is only partly dilated (an unfortunate practice of some traditional birth attendants), and when they are fully dilated are so tired that a vacuum assisted delivery is necessary. I have been working hard to reduce the LUCS rate, but sometimes there is no option as previous Caesarian sections have been performed. This photo shows a uterus 'opened like a book'.



The patient had a previous caesarian section in the Congo. I am not sure if the uterus was properly closed, or perhaps they only had gut sutures, but the lower half of the uterus was open and fused against the back of the anterior abdominal wall. In the current pregnancy, the placenta was in the uterus, but there was a small gap between the abdominal wall and peritoneal cavity at the superior aspect of the uterus, resulting in the fetus and umbilical cord moving into the peritoneal cavity and developing normally in the peritoneal cavity while the placenta was in the uterus.

With patients often presenting to the hospital in advanced obstructed labour, or sometimes after the event with complications, the spectrum of post delivery complications seen is concerning. These have included unusual neurological syndromes in the legs from sacral plexus injuries, vaginal ischaemia causing vaginal stenosis, vesicovaginal fistulas, sphincter tears etc.

The other obstetric complication, seen about once every 3 to 4 weeks is a uterine rupture. These women have often been brought a significant distance to reach us. As well as the varying degrees of hypotension from blood loss they also have significant fatigue from a prolonged labour and varying degrees of sepsis from heavy intraperitoneal meconium staining. The one factor they have in their favour is that they are young and physiologically fit. The four patients I have treated so far all survived (although one was sufficiently hypotensive in spite of resuscitation that the uterine repair could only be safely performed using ketamine).

There is also a significant amount of gynaecological neoplasia, both benign and malignant. Cervical cancer usually presents in women with five or six young children, and is often too advanced to treat by the time of presentation. Nevertheless I have been able to diagnose some earlier cases and have begun what will be a series of radical hysterectomies. Large 'more benign' uterine and ovarian tumours also provide some surgical challenges. This 1.9kg uterine mass (likely uterine leiomyoma – but some question about an area of sarcoma – histology is awaited), had extended underneath the ureter on the right side, which was then fused into the pseudocapsule around the tumour, resulting in an interesting dissection.



This 2.6kg ovarian tumour was removed from a woman who was convinced she was pregnant and claimed to have had fetal movements, but after about 11 months of 'pregnancy' suspicions were aroused and she was referred in for assessment. This week I have seen two similar cases which I suspect are large ovarian tumours.



Can Kalene Hospital reach its potential?

Can one hospital, in a remote corner of Zambia, make a difference? After three months here there is no doubt in my mind that this is possible. So if it is possible is it likely? Is progress being made?

Significant progress has been made on a number of fronts over the last 3 years. Reliable 24 hour power is now in place. For further details see the hospital website at www.kalenehospital.com. The Nursing School for Zambian Enrolled nurses is being refurbished, the head tutor has been appointed and the school will open in 2008. This will significantly impact on the ability of the hospital to train.

Brass Tacks from the UK are working on a number of essential maintenance and renovation projects. Essential equipment has been sent out from the UK, resulting in a good anaesthesia set up in the operating theater. Current equipment projects include purchasing an Olympus endoscopy tower (we have some scopes) and setting up a High Dependency Unit to treat the sickest patients in the hospital. Support groups in the UK are continuing to assist the work.

However the critical factor in determining if Kalene will be able to reach its potential is people. Without additional medical and nursing staff who are prepared to take on the many physical and spiritual challenges, the hospital will not be able to expand to meet the needs around it, and working here will continue to be a struggle. If you know anyone who you think would be interested in working in a rural African hospital with the range of challenges outlined above feel free to forward this report!

All the best,
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