RSO Hernia Teaching and Training Report

Nsanje and Thyolo Hospitals Malawi, September 2015

Author: Peter Willson, Consultant Surgeon, Kingston Hospital, Surrey, UK

For: LAST and AMECA

Contents

Contents

1 Introduction 3
1.1 Itinerary 3
2 Training 4
2.1 Nsanje District 4
2.1.1 Nsanje District Hospital 4
2.1.2 Activity 5
2.1.3 Teaching 6
2.1.4 Surgical Officers 7
2.2 Thyolo District 8
2.2.1 Thyolo District Hospital 8
2.2.2 Activity 9
2.2.3 Teaching 10
2.2.4 Surgical Officers 10
3 Maintaining Contact 11
4 Travel 12
4.1 General 12
4.2 Nsanje 12
4.3 Thyolo 13
5 Accommodation and Meals 15
5.1 Nsanje 15
5.2 Thyolo 16
5.3 Blantyre 16
6 Future Teaching 17
Appendix 1: FEDBACK FORM and CERTIFICATES 18
Appendix 2: Useful Local Contacts 21
Appendix 3: What to Bring 22
Appendix 4: Basic Chichewa 24

1 Introduction

LAST has undertaken hernia training for rural RSOs' in Malawi for several years. This is the second visit by the author. The teaching was over two separate weeks between 01 and 10/09/2015. The aim was to provide sustainable training to resident surgical officers in rural district hospitals. In particular to teach the technique of Lichtenstein inguinal hernia repair.

1.1 Itinerary

Air Ethiopia from London Heathrow via Addis Ababa and Lilongwe.

Arrival Blantyre : 30/09/15

Transfer Nsanje: 31/08/15

Return Blantyre: 04/08/15

Transfer Thyolo: 06/09/15

Return Blantyre: 11/09/15

Depart London: 12/09/15

2 Training

2.1 Nsanje District

2.1.1 Nsanje District Hospital

Nsanje is virtually at sea level and on a flood plain. It is hot and humid. The coolest months are in winter between May and July. From October the temperature rises and can reach 45 or even 50 degrees centigrade in November. The rainy season is November to March and the humidity is high. In September the temperature was 30 degrees and on this occasion there was no rain.

Nsanje hospital serves the southern Malawian province of Chikwa which has a population of 250,000 although many patients cross the border from Mozambique for treatment. The hospital has surgical, medical, maternity and paediatric wards staffed by nurses and resident medical officers for each specialty. When I were at the hospital there were two doctors, Dr Yamikani, the District Medical Officer and Dr Matchaya, the District Health Officer.

The hospital supports plain radiology and ultrasound (with reporting that I was not prepared to rely upon) but no other imaging. The labs can perform FBC, cross match, U&E, LFT, glucose, CD4 count, hepatitis B, malaria screen and a gram stain although had run out of reagents for all chemistry.

Every morning, except Wednesday, at 07:30 in the conference room in the administration block there is a handover meeting. It starts with prayer, supervised by the District Medical Officer and is attended by all the medical officers for the various specialties. “Special” cases are presented from the previous day on call and the RMO presenting is questioned about the case. I was expected to attend this meeting and reported back on the course on the last day. On Wednesday the DMO performs a general grand ward round which we were unable to attend due to theatre commitments. At the handover round the patients for the hernia procedures were noted and it is worth asking to see the record book for the male surgical ward (and female if appropriate) to determine the number of patients.

There are two theatres for all specialties which allow elective surgery and emergencies such as caesarean sections to occur simultaneously provided there are two anaesthetists, otherwise elective surgery stops.

The normal elective operating day for general surgery is Tuesday. However I was given the theatre for every day of the course.

Patients were seen on the ward preop and consented. Patients were then brought on trolleys to the theatre corridor to wait for surgery. I reviewed and marked all patients here. Patients are not routinely marked and I encouraged the RMO to do this.
Adult hernia procedures are done under spinal anaesthesia by an anaesthetic RMO. General anaesthetics are thiopentone, suxamethonium and halothane, or ketamine.
There were no nurses to assist at the operating table. Theatres allowed only two people at the operating table to save on sterile gowns and surgeons double up as the scrub nurse.
The instrument sets are basic, variable and unsorted. Be prepared for over or undersized instruments which may or may not be sharp or grip as expected. There is no routine counting of instruments or swabs. Drapes are old, well used and in places full of holes and maintaining sterility was a challenge.
There is now a functioning overhead theatre lamp.
The theatre has a functioning air conditioner.
The theatres have a diathermy (Valleylab Force II) which they use with a multiply reused, single use gel plate and hand pencils sterilised in Cidex trays kept in theatre. It has foot switches which do not work.
Take lavatory paper as the hospital supply is variable in the staff facilities.

2.1.2 Activity

Day 1. 01.09.15.

Theatres

3 patients. 1 with bilateral and 1 with a unilateral inguinal hernia. The third patient had bilateral inguinal hernias but a scrotal abscess following previous hydrocoele surgery. The abscess was drained and debrided and the hernia repairs postponed.

Ward

I was asked to review an elderly patient on the female surgical ward with dry gangrene of the left leg complicated by skin fissuring and infestation with obvious maggots from hip to foot. She was transferred to Queen's at Blantyre.

Day 2. 02.09.15.

Clinic

This preceded theatres. Together we saw patients with the following conditions.
Probable myosarcoma of the deltoid – referred to Queens

Tendon sheath ganglion of the foot – No action

Prostatic hypertrophy with catheter – Start alpha blockers and trial removal of catheter

Probable right supracondylar fracture of the humerus, two days old, pulse present – referred to orthopaedics.

Reactive cervical lymphadenopathy, settling – no action

Superficial fistula-in-ano following an abscess – booked for laying open

Implantation dermoid left index finger – no action

Probable Burkitt's lymphoma – referred Queen's.

Probable cutaneous neurofibromatosis – no action

Meningocoele – referred Queen's

Giant pedunculated probable low grade liposarcoma left scapular – admitted for excision.

Theatre

2 patients. One male, one female both with unilateral inguinal hernias.

<u>Day 3. 03.09.15.</u>

Ward

Elderly male, grossly enlarged bladder, clinically uraemic – no reagents for U&E. Patient removed to home and declined treatment.

Teenager with a crocodile bite affecting abdominal and chest wall. Penetrating injuries to both cavity. Pneumothorax treated by chest drain but no internal abdominal injury.

Theatre

Excision of Liposarcoma left scapular. Performed for debulking purposes. Patient from Mozambique so not eligible for oncology referral to Blantyre.

Circumcision for HIV prophylaxis

I assumed every patient had HIV and used appropriate precautions when examining and operating.

2.1.3 Teaching

I taught operative technique in theatres and diagnostic techniques in clinics on the ward. All hernias were repaired by Laston using a Lichtenstein repair and who showed significant competence with the technique and was keen to learn.

Patients were seen postoperatively on the ward the day after surgery and I taught that these patients do not need an IVI after they start drinking, can eat as soon as they feel ready, mobilise as

soon as the spinal has worn off and can be discharged the day of or after surgery if urinating, eating, mobile and there are no wound problems.

2.1.4 Surgical Officers

<u>Laston Nthukutu</u>

Experience: Final year of BSc course. Final exams May 2016. Due to attend revision course in Blantyre, April 2016 run by Australian surgeons from Doctors Without Borders (? Medecins sans Frontiers). Intention to apply for medical school.

Contact details available through LAST

Nsanje District Hospital, PO Box 30**,** Nsanje

<u>Joseph January</u>

Contact details available through LAST

Laston Nthukutu is the RSO at Nsanje and had been present during my last visit in May 2014. Joseph January, the RSO at Chickwawa was on leave but would have joined us if he had been able.

I was able to determine that both RSOs are taking final exams next May and would prefer a visit after these next year. Laston intends to move to Chickwawa and apply for a medical degree.

2.2 Thyolo District

2.2.1 Thyolo District Hospital

Thyolo (pronounced Cho-Lo) Hospital is situated on the Thyolo Escarpment approximately 50 km south east of Blantyre. It is surrounded by tea and macademia plantations The hospital is just off the south side of the Mulanje to Thyolo road as the town is reached. The hospital is newer than Nsanje and appears better equipped.

The Hospital is run by three clinicians; District Heath Officer, Dr Mike Mulowo, District Medical Officer, Dr Jones Chise, and Hospital Medical Officer , Dr Tamandani Hiwa.

All equipment and theatre clothing had to be logged with pharmacy before use and a written inventory drawn up and signed. In future this would be best done in advance.

There is a pathology lab for routine U&E, LFTs, glucose, full blood count, clotting screen and cross match, although reagents for most tests have not been available for some time. Microbiology can perform swab but not blood cultures, TB screening, virology for Hepatitis A, B, C and HIV (both viral load and CD4 count). There is ultrasound, plain and contrast radiology, although there has been no barium available for over a year.

The hospital has water outages once a week when there is no running water and scrubbing is performed water buckets with fitted taps. Electricity supplies are variable but there is a backup generator.

There is a male and female surgical ward. The operating department has four theatres of which two are in regular use.

There is a surgical outpatient room in the casualty department shared between two RSOs. Privacy is minimal.

There is an administration and teaching block with a lecture room. A video projector is available which will connect to older VHS computers but it would not accept the output from my HD Dell windows tablet.

The day started in a handover meeting in the lecture room at 07:30 attended by all Medical Officers, Doctors and senior nurses. An account of on call, maternity and sick ward patients was given and discussed. Special cases were presented for detailed discussion. During the week the surgical RSOs presented two special cases using PowerPoint based on patients operated during the course – Incisional and Spigelian hernias.

2.2.2 Activity

Day 1. 07.09.2015.

Wards

Pre op patients for hernia teaching seen and marked. There was a child of 1 year scheduled but the anaesthetist had no experience at this age and the child was referred to Blantyre.

Clinic

Gross neck keloid, knee effusion, myelocoele, submandibular swelling, soft tissue tumour in the popliteal fossa, TB abscess left adductor compartment and over head of clavicle, three patients with ovarian cysts

Theatres (PM only)

Incisional hernia repair; Lower midline caesarean. Sac plication and rectus approximation with heavy nylon.

Day 2. 08.09.2015.

Theatres

Male right indirect inguinal hernia repair

Female left lower Spigelian hernia repair

Male recurrent right direct inguinal hernia repair and hydrocele.

Formal Teaching

On the second day I was asked to deliver a lecture to the hospital staff on hernias during the lunch hour for which I used the LAST PowerPoint on hernia repair modified for the audience.

Day 3. 09.09.2015.

Handover

PowerPoint Case presentation by C Mutoma on the incisional hernia repair with teaching by me.

Theatre

Male, large right indirect inguinal hernia repair

Epigatric hernia repair

Day 4. 10.09.2015.

Handover

PowerPoint Case presentation by C Mutoma on the Spigellian hernia repair with teaching by me.

Ward

Female with advanced left breast cancer and axillary lymphadenopathy – referred to Blantyre.

Theatre

Two male right inguinal hernia repairs – both repaired by Francis Kapanga assisted by Emmanuel Phiri.

Female with left inguinal hernia / cyst cancelled as anaesthetically unfit

2.2.3 Teaching

I taught operative technique in theatres and diagnostic techniques in clinics on the ward. All hernias were repaired by Francis assisted by one of the other RMOs and using a Lichtenstein repair. Francis was competent and all were keen learners.

During lunch in theatres I taught knot tying skills were taught and practiced by all attending RSOs including hand tied reef, surgeons and Aberdeen knots

There was formal teaching with PowerPoint during the handover meetings shared with the trainees, and at the hospital Grand Round Meeting.

2.2.4 Surgical Officers

Francis Kapanga

Experience: Surgical Intern. Three years as a surgical RSO. Intention to apply for Surgical BSc and then med school. He is the senior general surgical RSO.

Contact details available through LAST

Knoxy Ndalama

Experience: Surgical Intern. One year in dept surgery. Intentions unknown.

Contact details available through LAST

Chifuniro Mutoma

Experience: Surgical Resident. Three months as surgical RMO

Contact details available through LAST

Emmanuel Phiri

Experience: Surgical Resident. Intentions unknown

Contact details available through LAST

Felix Nansongole

Obstetric Intern: Experience and intentions unknown

Contact details available through LAST

Takondwa Chimberenga

Resident: Experience and intentions unknown.

Contact details available through LAST

Steven Dimba

Surgical Intern. 1 year in surgery. Intentions unknown.

Contact details available through LAST

3 Maintaining Contact

It is my intention to issue simple certificates of completion of hernia training to each RSO after completion of a feedback questionnaire sent by email (both appended).

The surgical officers use WhatApp to communicate and I would suggest linking to their network if possible. Otherwise e-mail communication on a periodic basis would seem the best means of communication when out of Malawi.

Use should be made of the Malawian Surgical Officers Facebook page at

4 Travel

4.1 General

When driving the speed limit is 50 km/hr in villages and towns otherwise the national speed limit is 80 km/hr. Traffic Police with speed cameras are relatively common and an on the spot speeding fine is KW14,000. Livestock on the road is common and cyclists and pedestrians with large loads line the road. Take care and use the horn. Do not drive at night. Sunset is about 5.30. Local traffic will use the road without lights and accidents are common.

4.2 Nsanje

A Hilux diesel vehicle was hired for the journey from Blantyre to Nsanje. The road is tarmac throughout and takes approximately 3 hours. The road is the M1 but not marked as such. From the compound on Magasar Rd turn left and left again at the end of the Road. At the next T junction turn left again. Follow this road through central Blantyre. At the first and second roundabouts go straight on and enter the dual carriageway towards Limbe. Continue to a roundabout with a large glass Iveco office block on the left hand corner and the Queen Elizabeth Hospital on the far right corner, turn right. Follow this road past the medical school and across several large junctions until it meets a T junction with two large Churches on each corner. Turn left. This is the M1 and it is one road for 175 km to Nsanje. The road quickly meets the escarpment overlooking the Shire (pronounced Shee-rey) river and its flood plain winding down in two stages. There is a viewing area on the left shortly into the first descent and worth a stop. Overtaking on bends is not recommended even if stuck behind a slow moving sugar cane truck. As you descend the temperature and humidity rises.

There are three police road checks between Blantyre and the Shire River crossing at the bottom of the escarpment. Keep your driver’s licence and passport (or copy of photo and immigration stamp page) to hand in case they are needed. Have a full tank of petrol before you start and top up when you see a petrol station as they may not have petrol if you run low and really need it. There are multiple stations before you reach the escarpment and one just after the river crossing on the right, going south. There is another about half way into the journey at Nchalo and another half way between Bangula and Nsanje at Tenkani both on the left as you travel south. The one at Tenkani is easily missed. It has no sign, set back from the road and has only two pumps. There is a fuel station in Nsanje just past the hospital on the right, opposite the bank and the turning to the town centre and port.

The Iris compound is just north of Bangula and approximately 50km from Nsanje. Leave an hour to get to the hospital. Turn left out of the compound along the M1 and through Bangula. Turn right at the roundabout just past the town centre and then straight through to Nsanje.

My Hilux vehicle was hired in Blantyre and cover for breakdown provided by the hirer. Whilst travelling from Nsanje to Iris at 3.30pm on the second day the vehicle transmission failed. Phone calls were made to Moses, Iris and Ruthie. Moses left Blantyre with two mechanics to assist. During the interval by adjusting the battery terminals and diesel mixture I was able to start the Hilux and return to Iris at dusk. Moses was diverted to Iris and arrived after 2 hours. The Hilux was exchanged for a small petrol hatchback used for the remainder of the itinerary.

I visited the river and port at Nsanje to view the area. The river is populated by crocodiles; a protected species. The hospital sees regular injuries and fatalities from these animals including a teenager with chest and abdominal bite wounds during the course.

4.3 Thyolo

From Namiwawa proceed as if going to Queen's Medical Centre but at that roundabout go straight on past Shoprite on the right and at the next roundabout bear left onto the Zomba Road. After about 2 Km turn right at a junction where graded aggregate is kept in large mounds on the far corner. This road leads to the North side of the Limbe one way system which due to roadworks on the South side was two way. Proceed down the road to a roundabout and go straight on and under a large hoarding to the next roundabout. The road to the left is to Mulanje and to the right, Thyolo.

The road to Mulange ends at a T junction with the Mulanje –Thyolo road on the outskirts of the town. Turn left to Mulange for the Kara O'Mula Hotel, in the direction of Mt Mulanje and the Mozambique border. The town is drawn out along the road with several busy areas. You will go past a sign to the right for Mulange Mission Hospital after about 8 km and the turning to the hotel is on the left after about 10 km on a small rise in the road just after the National Bank of Malawi and a walled market area. If you reach Mulanje District Hospital, rumble strips in the road or a police road block you have gone too far. The road to Kara O'Mula is tarmac and ascends up the mountain for about 2 km to the hotel. The road is steep in places. Car park 1 is closest to reception.

The journey to Thyolo from Mulange is straightforward. After descending from the hotel turn right and follow the road for approximately 40 km to Thyolo. Luchenza is about halfway and marked by a

railway crossing. The approach to Thyolo is anticipated by tea plantations on both sides of the road. The hospital is the first set of buildings to be seen on the left. They are painted terracotta, enclosed by a wall and there is a large water tower. Turn left after the hospital and left again at the T junction. The entrance gate is 200 m on the left. Continuing along the main road past Thyolo will eventually bring you back to Limbe.

The Mulange to Thyolo road is heavily populated with several markets and schools along its length. The road is therefore busy with pedestrians, especially children, and cyclists with wide loads along most of its length in both early morning and late afternoon.

Fuel and banks can be found at Nsange, Luchenza and Thyolo.

5 Accommodation and Meals

5.1 Nsanje

Accommodation for the Nsanje training was at Iris Africa, 3 km before the roundabout and just before Bangula on the left, surrounded by a high brick wall.

I was given accommodation in their guest quarters. These are shared, sex segregated rooms with separate, segregated shower and washrooms supported by hot and cold water. The tap water is drinkable. There is a continuous electricity supply, the output and sockets are UK standard.

There is a well-equipped communal kitchen with a hob, oven and fridge. It is self-catering unless otherwise organised in advance. You need to bring food for breakfast and evening meal. There is a no-alcohol policy in the compound. Be prepared to share food with other visitors although I was the sole guest on this occasion. Fruit, veg, tinned food, dry goods and some meat can be sourced locally from shops in Bangula or Nsanje. Supply your own milk, bread and anything pre-processed for all meals from Blantyre (Shoprite supermarket is a short way further down the dual carriage way from the Queen's Hospital roundabout).

Iris Africa is a Canadian, evangelical, charismatic Christian organisation. The compound contains an orphanage for 70 children from 3 to 18 years, school, church, theological college, fish farm and arable land. They were building a skills workshop while I was there. It is funded from donations and they charge $6 per person per night and I made a donation on top. Take some gifts of food (biscuits, cake etc), sweets, pens, pencils and paper.

Whilst at Iris I volunteered to see any of the children or staff who had medical issues.

There is a bank with an ATM at Bangula next to the Mosque. Apparently the bank will not exchange £50 notes. Opposite this is a shop that can add credits to a mobile phone with an Airtel SIM card (red frontage) and a grocery store (green frontage). There is a market for perishable foodstuffs in Bangula.

Nsanje Hospital provided a communal lunchtime meal in theatres of rice and meat or bean stew for all the staff which is eaten from plates with fingers. I used travel cutlery. This was supplemented by a crate of soft drinks (3,000Kw) bought by me on day one but supplied by the hospital on the other two days.

5.2 Thyolo

During the course I stayed at the Kara O'Mula Hotel in Mulange. The hotel has two bars, a restaurant and a pool. Bed and breakfast was arranged by AMECA at Malawian rates and cost about Kw 100,000 for 5 nights. An evening meal is Kw 3000-6000, a local beer Kw 650 and bottled Coke and Fanta Kw 300.

Lunch was provided by the hospital as chicken with a choice of rice, chips or maize meal and a salad.

At the end of the course I was invited by the RMOs to a local bar for a beer and debrief.

5.3 Blantyre

Accommodation in Blantyre was organised through AMECA.

6 Future Teaching

Continued training in mesh repair technique for inguinal hernias: Although training in the modern technique of hernia repair is important, I am uncertain whether mesh could be sterilised locally at Nsanje as there is no facility to individually pack the mesh pieces. Although this is not the case at Thyolo. Mesh sourcing in the form of mosquito netting (without repellent impregnation) should be possible but all nets I saw were a wider weave compared to that supplied by LAST. I am uncertain who would fund procurement.

The Intercollegiate Basic Surgical Skills Course: The training that I undertook would lean itself towards incorporating a formal Basic surgical skills course for a wider group of RMOs in a future visit. Questioning of the RSOs' indicated that this would be best in Blantyre and they would expect rural medical officers to be able to travel. The Royal College of Surgeons of England has a programme of overseas BSS courses and could be contacted for assistance if this is to be pursued. I am aware that this has already been done through Bob Lane at Lilongwe.

Feedback: I would suggest adopting the appended feedback and contact form for RSOs taught by members of LAST.

Future Teaching Subjects: The RSO have asked that future training include teaching in urology (particularly open prostatectomy), amputation and obstetrics.

Venues: I am uncertain whether future visits should mean going back to the same hospital or follow surgical officers who rotate between rural hospitals approximately every 18 months.

Appendix 1: FEDBACK FORM and CERTIFICATES

LAST

SURGICAL TRAINING FEEDBACK FORM

To be appended