Thyolo District Hospital, Malawi

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This visit to Malawi was a site inspection as part of Operation Hernia, a UK-registered charity, which teaches and trains local surgeons in hernia surgery in low-income countries. Previous visits have been made to West Africa but also Mongolia and Ecuador. This visit was made to establish a link in Malawi. Malawi has a population of approximately 13 million and its health service is provided by 4 central hospitals and 21 district hospitals, plus a number of smaller mission hospitals, which are outside government funding. Our primary attachment was to Thyolo District Hospital, but we also had the opportunity to visit the Queen Elizabeth Central Hospital, and its linked orthopaedic hospital, the Beit-Cure Hospital in Blantyre. These are recognised as teaching units within the College of Medicine.

Thyolo District Hospital

Thyolo hospital serves a population of approximately 600,000 in an area of approximately 721 square km. Within this, there are 32 health centres and one mission hospital (Malamulo), approximately 10 km from the government district hospital. The majority of patients attend hospital under their own means but there is an ambulance service to transfer patients from the local health centres and to the central hospital in Blantyre in cases of emergency. The hospital is run by the District Health Officer (DHO, Dr Andrew Likaka), District Medical Officer (DMO, Dr

Michael Murowa), 20 Clinical Officers and nursing staff. There are no other Malawian doctors other than the District Health Officer and District Medical Officer. Whilst we were there, there were three doctors on intern programmes, and one qualified doctor as part of VSO from the Netherlands. The HIV services in the hospital are currently supported by Medecins Sans Frontiers (MSF), which assists with day to day running of the hospital, transport, equipment and supplies. They are due to withdraw in approximately 18 months time, which we foresee will cause considerable pressure on current service provision.

The hospital has a pharmacy, which is stocked with a basic number of drugs, an x-ray department, run by two radiographers who can do plain x-rays and abdominal ultrasound using a curved array transducer, and a casualty department. The hospital has 350 beds but caters for 4-500 patients, although this can exceed 700 patients, by placing extra mattresses on the floors. It has three operating theatres, only two of which are used, and these are staffed by two anaesthetic clinical officers and 4-5 clinical officers with basic surgical skills. Two of these are more involved in gynaecology and one in orthopaedics. The hospital deals with a large volume of emergency medical and surgical problems. It has a particularly active obstetric department with about 4000 births per year. We saw a lot of complicated obstetric problems and there were two maternal deaths during our time there. There are visits from specialists from Blantyre. We were told that there is an Obstetrician/Gynaecologist who visits in 2 weeks out of four to run clinics and to train Clinical Officers in the common Obs and Gynae conditions. There are also occasional visits from other specialists.

Clinical Case Mix

During our two weeks, we saw a large number of patients presenting with various medical and surgical problems. We saw cases of malaria, tuberculosis, HIV (prevalence 12% in this population), cholera, rabies, meningitis, transverse myelitis,

pyomyositis, acute and chronic urinary retention due to prostatic hypertrophy (large volume of cases). On the maternity side, there are approximately 16000 live births within the district per year, some 4000 are born in the hospital. There are sometimes 10 deliveries a night, and 4-5 caesarean sections per night. The overall district caesarean rate is approximately 4%, and the hospital caesarean rate approximately 10%. There were cases of post-partum haemorrhage and uterine rupture. On average there are about 20 maternal deaths per year, of which about half are direct obstetric deaths (PPH, eclampsia, ruptured uterus etc.). Other deaths are mostly HIV related.

Our Experience

There is a structured timetable in the hospital. The day starts at 7.30 am with a clinical meeting, to which all clinical officers, overseas doctors, DMO, DHO, pharmacy and nursing staff are supposed to attend. Reports are given from the previous days admissions by all departments (surgery, paediatrics, maternity, internal medicine). After the reports are presented, more detailed case reports are given and difficult cases discussed. Advice is given by the DHO, DMO and visiting doctors as required. There are also separate case presentations given as part of the on-going academic programme. At the end of the meeting, the DMO usually gave a report on the current supplies, what was available in pharmacy and the petrol and transport situation, which was difficult during our time there. After the morning meeting, surgical ward rounds take place on Mondays, Wednesday and Fridays, and would take approximately 1-2 hours when we would see 15-20 patients. Patients were examined and management plans instigated. If they needed to be transferred to tertiary care, the relevant specialist was telephoned at Blantyre, and transport was arranged. They have a good system here where patients keep their own medical records in a health 'passport' and communication is maintained through this, including prescriptions.

On Tuesday and Thursdays, there is usually an all-day elective operating list, although emergency cases are done at any time and interrupt the elective lists. There is a surgical clinic on Wednesday afternoon, in which about 20-30 patients are seen. Our Experience We attended the hospital as part of Operation Hernia, and therefore the focus of our activity was on hernia surgery. It had previously been arranged that the elective lists would be filled with patients who had complex inguino-scrotal hernias. We found this extremely interesting, as we do not see this type of hernia very often in the UK. Technically, they proved to be quite demanding, especially as we did them all under local anaesthetic. We also inserted chest drains for pyothorax and haemothorax following trauma, saw cases of pyomyositis, severe third degree burns and advanced skin malignancy. We saw many cases of prostatic outflow obstruction, which are usually dealt with at Thyolo by the Clinical Officer within surgery who is able to perform transvesical prostatectomies. His logbook shows that he is doing more than 100 per year. One theatre is almost in constant use with caesarean sections, hysterectomies, and D&C's.

Other activity

We had the opportunity to visit the local mission hospital at Malamulo. This is a privately funded institution and charges patients a small fee for the service. Unfortunately this is beyond the vast majority of the local population, and despite having slightly better facilities than Thyolo District Hospital, is relatively quiet - there were more medical staff than patients on the day we visited. The senior medical staff are on secondment from organisations in the United States. They do provide good training for the local nurses and clinical officers who then transfer to the government hospitals. They can also provide obstetric and paediatric care under a Service Agreement with the Ministry of Health of Malawi who then refund the costs. We visited Professor Eric Borgstein, Professor of Surgery and Professor Nyengo Mkandawire, Head of Orthopaedic Surgery, at Queen Elizabeth Central Hospital. This hospital was built 50 years ago to serve a population that has now increased fourfold.

Our initial impression was that the fabric of the hospital was not as good as Thyolo, but that staffing levels and support facilities are much better with MRI scanning, CT scanning (currently out of service) and access to specialists such as oncology and neurology. The casualty department there sees approximately 700,000 adult patients a year, and 350,000 children. We attended the launch conference of the COST Africa project for two days whilst we were there. COST Africa is a large multicentre randomised controlled trial, funded by the European Union, to look at training Clinical Officers to provide surgical cover in district hospitals in Malawi and Zambia. There were attendees from both countries, as well as the Royal College of Surgeons of Ireland (RCSI). The Principal Investigator is Professor Ruairi Brugha, from the RCSI. This conference gave us great insight in the problems of providing surgical cover in low-income countries. We also gained insight into the differences of provision of surgery in tertiary and secondary hospitals within Malawi and Zambia.

Towards the end of our stay, we convened a meeting between Professor Borgstein, Professor Mkandawire and Mwapatsa Mipando the Dean of the College of Medicine in Blantyre, with a view to developing clinical and educational links between surgical trainees within the UK and the College of Medicine, Blantyre. We feel that the experience gained overseas would be very beneficial to trainees within the UK in a number of specialities, particularly general surgery, obstetrics, urology, paediatric

surgery and orthopaedics. It is our plan to move this forwards as we received favourable interest at the Malawi end. We also feel that there is potential for exchanges in other staff, such as nursing and physiotherapy. We have drawn up a Letter of Agreement between Thyolo District Hospital and Operation Hernia to provide annual visits over the next three years initially to build on the skills of Clinical Officers in hernia surgery. This could potentially be expanded to involve other district hospitals in due course.

We are grateful to Professor Kingsnorth for supplying us with mesh and advice in planning the visit.

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