ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Objective 1 - To observe and describe how the guidelines for indications for elective procedures such as a hip replacement are different in Malawi when compared to the UK. To determine how limited resources have an impact on the decision of a physician when determining whether a patient requires an elective procedure.

During my placement in orthopaedic surgery in Malawi, I was able to witness first hand that trauma patients make up the majority of the cohort of patients on the surgical list. In comparison, during my orthopaedic placement in the UK I saw that elective surgical cases made up the majority of the surgical list. I believe that the increase in number of trauma patients and the decrease in number of elective patients is down to a number of factors. The first factor is the higher incidence of road traffic accidents in Malawi. From my experience, most of the patients on the orthopaedic ward had high impact injuries such as fractured femurs from being involved in road traffic accidents. I also noticed that a number of the patients were pedestrians that were hit by a vehicle or had a fall getting out of a moving vehicle. In Malawi a number of cars don't have working lights and there are very few pavements making it dangerous for pedestrians, particularly at night time. There are also looser regulations for cars and matatus (small buses) than in the UK which also increases the incidence of road traffic accidents. The second factor is the limited resources available in Malawi. From speaking to the orthopaedic consultant I found out that the waiting list for elective procedures was over 9 months as the large number of trauma patients had to be prioritised. Also from experience in the orthopaedic clinic, I saw that the majority of the elective cases were trauma patients who didn't present to the hospital at the time of the incident. These patients presented with mal-union or non-union of broken bones, mostly of the lower limb. During the clinics I didn't see any patients presenting with chronic conditions such as osteoarthritis of the hip. This is most likely due to the lower incidence of chronic conditions in Malawi from the shorter life expectancy compared to the UK. I believe that the final factor is due to the belief that patients have a perception that the system cannot support elective procedures such as an elective hip replacement for osteoarthritis as it doesn't have the resources to do so. Although the waiting list is long and there is a less of a priority for elective procedures for chronic conditions they may be put on the surgical list the waiting time would be very long, preventing patients presenting to the hospital and primary care with these orthopaedic conditions.

Objective 2 - To observe methods and techniques of orthopaedic surgery in Malawi, in contrast to those used in the UK. Particularly in the surgical management of trauma patients.

From the valuable experience I got when scrubbing in or observing surgery in Malawi I noticed that there were a number of different surgical techniques used in comparison to surgical techniques used in the UK. As mentioned previously, trauma patients make up the majority of the orthopaedic list, with many having multiple high impact injuries. As there were only two orthopaedic consultants present in the hospital it was quite common for the trauma patients to first be stabilised, given pain killers and then wait a number of days before surgery. Whereas in the UK, surgery for traumatic orthopaedic problems would happen promptly to avoid any complications of the trauma. From speaking to an English orthopaedic doctor who was volunteering in Malawi, the equipment used in surgery in Malawi is very different from the UK. A lot of the more advanced surgical equipment is donated from other countries such as the UK and America, however there are a number of cheaper alternatives that are used in Malawi. This includes equipment such as the Surgical Implant Generation Network (SIGN) Nail. The SIGN Nail is an intramedullary nail that can be used to secure two pieces of bone that have been seperated in trauma injury. The SIGN Nail is a very effective, adaptable and low cost piece of equipment that has revolutionised orthopaedic surgery in less developed countries. I was able to see first hand how the SIGN nail could be used in the majority of tibia and femur fractures caused by road traffic accidents.

Objective 3 - To describe the pattern of post operative complications in those who are HIV positive and the implication this has on the healthcare system in Malawi, including duration of stay in hospital

With over 10% of the population being HIV positive, the Human Immunodeficiency Virus is a major problem in Malawi. During my time working in Queen Elizabeth hospital I met a number of HIV positive patients on the surgical ward. The HIV treatment programme is now very effective in Malawi and is currently ready available and accessible, however the problem lies with the education of the presentation and prevention of HIV. I witnessed a number of cases of HIV positive patients undergoing orthopaedic surgery for trauma accidents. I was also observing in theatre for a HIV positive patient undergoing an operation. CD4 count is closely monitored for patients undergoing surgery as a low CD4 count may be a contraindication for surgery as of the high risk of post operative infection. During my time I witnessed a case of post operative infection in somebody who was HIV positive. The patient required a long course of intravenous antibiotics and surgical debridement which prolonged the stay in hospital. The surgical methods and techniques of a HIV positive patient don't differ from those of a HIV negative patient, apart from the surgeon being more cautious about the risk of transmission. There is no doubt that HIV has a large implication on the healthcare system in Malawi in terms of duration of stay in hospital, cost of treatment as well as the number of diseases that present from having undiagnosed or uncontrolled HIV.

Objective 4 - To develop a greater understanding surgical techniques used in orthopaedic surgery. Also to further develop skills in procedures that will be useful to have as a foundation year doctor

During my time at Queen Elizabeth hospital I was able to observe and scrub in for a number of orthopaedic surgical cases. The cases were varied and ranged from an open reduction internal fixation of an open tibia fracture to an internal fixation using a SIGN nail of a fractured femur. From my experience I was able to not only further my knowledge of surgical anatomy but also learn the difficulties, challenges, benefits and complications of a number of orthopaedic surgical techniques. On the wards I was very fortunate to have teaching on how to do a plaster of paris including how to do a backslab. I also learnt how to provide both skin and skeletal traction to allow union and healing of fractures. These skills will be very useful for my foundation year 1 rotation in orthopaedic surgery. I was also presenting patients on the ward round and coming up with potential management plans for patients as well as receiving teaching from the surgical consultants. I believe the skills that I have learnt and developed in Malawi can be transferable to practice in the UK as a foundation year doctor.