A Trainee's experience of voluntary work in trauma and orthopaedic surgery carried out in a developing country

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MOTEC LIFE UK www.moteclife.co.uk. (of which Dr. George is a founding trustee and former treasurer) is an orthopaedic charity group linked with hospitals in Ghana

Abstract

There is a wide variety of orthopaedic pathology in developing Africa. Patient perceptions and management differs from that in the UK due to various factors. The knowledge of this is also good for the orthopaedic trainee as it helps broaden the mind about orthopaedic care in the developing world.

This article describes the first hand experience of a surgical trainee carrying out voluntary trauma and orthopaedic work in a developing country in Africa.

Introduction

There is a big difference in the standard of health seen in developing Africa and in the western world. Sub-Saharan Africa is still in the dark when it comes to the management of trauma and orthopaedic conditions.

In the latter half of 2006 an orthopaedic surgeon, anaesthetist, surgical assistant, three theatre nurses and I embarked on a working visit to Ghana with an orthopaedic charity organization - Motec Life UK (registered UK charity). The aim was to support and improve orthopaedic services in one of the major orthopaedic centres in Ghana. A lot of planning, logistics and meetings preceded the trip.

The main target hospital, which served as the base for my experience was the St. Joseph Hospital at Koforidua in Ghana. It is a 180 bedded centre serving a population of about 250,000 people. There are around 32,000 new outpatient appointments annually and 1,500 admissions last year of which 60% underwent surgery. St. Joseph's is the main orthopaedic centre in Ghana, but it has a wide catchment across West Africa, with patients coming from Nigeria, Benin, Togo, Ivory Coast and Burkina Faso for treatment.

Clinical Setting

On my first working visit to the centre we were introduced to the local doctors and other medical personnel. The lead orthopaedic consultant and I carried out a ward round in the male and female wards. Most of the cases seen in the male ward were chronic. Presentation of acute trauma cases to St. Joseph is a rarity. Patients who sustain fractures (as I was going to discover) would normally present at the local traditional bone setters for treatment and only when this fails do they come over to the centre. The traditional attitudes to and perception of injury has been the main determining factor to the management of acute trauma in the local community. Another factor is the economic situation. The low standard of living means that patients will go for the traditional and cheaper healers. For example a 34-yr-old right-hand dominant woman, sustained a fracture to the midshaft of her right humerus in a road traffic accident two years ago. She had initially received traditional treatment from the local bone setters. With no improvement

in her condition she presented to St. Joseph's with malunion. She had an open reduction and internal fixation with bone grafting. This is the typical story of acute trauma in this locality.

Compound fractures are managed conservatively. We saw quite a few cases but unfortunately many had become infected. There was poor infection control on the wards and I tried in my own little way to help educate some of the nursing staff on the issue of hand washing in between patients.

Femoral shaft fracture patients are managed by skeletal traction. Cases which will normally be managed with internal fixation are treated with plaster immobilization. This usually increases length of inpatient stay and often leads to bed crises and patients are turned away.

The elective orthopaedic pathology was similar to that in the UK population. Osteoarthritis and chronic low back pain are the most common problems.

I remember the case of a 6 year old boy who had a one year history of chronic osteomyelitis of his right femur (Fig. 1) and was being treated with antibiotics.

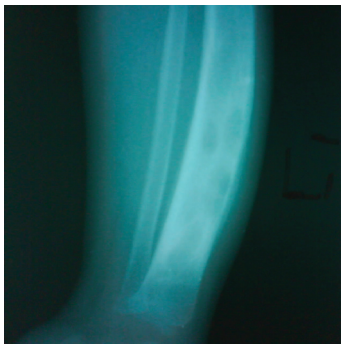

Figure 1. 6 yr old boy with Chronic Osteomyelitis Left tibia – treated by Motec, had surgical Decompression

He had developed a bony sinus and this was discharging pus (Fig. 2) Our team took him to theatre and he underwent a surgical decompression of his femur. When we saw him on our second visit to Ghana in April 2007 he had made a full recovery.

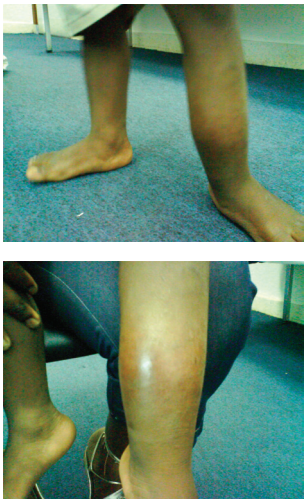

Figure 2

Out-Patient Clinics

My consultant and I ran an out-patient clinic at the hospital. Patient attendance during the clinic session was quite high. I saw a variety of orthopaedic trauma pathology. The session ran from 8.30 a.m to 5.15 p.m and I saw 32 new patients and 20 follow up cases in total. Conditions included:

- Chronic osteoarthritis,
- Congenital talipes equinovarus
- Avascular necrosis of the femoral head due to sickle cell disease
- Hip and knee osteoarthritis
- Chronic Dislocation of interphalageal joint
- Fracture malunion and non-union.
- Degenerative disc disease of the lumbosacral spine

There was an interesting case of a 17-yr-old male who sustained a right patella dislocation 6 months earlier while playing football. He told me that he had a lot of pain in his right knee immediately after the injury and was give

pain killers in a local chemist and somehow he had been managing to walk around with it. I was quite surprised that he had this injury for six months. On examination he had very tight quadriceps tendons and had restricted flexion and extension movements but no pain. He needed surgery to correct this but he could not bear the financial burden.

I also reviewed a 20-year-old lady with congenital dysplastic pelvis. (Fig. 3) This was the very first case of its kind I had seen and she was being managed with leg calipers. She had presented in clinic that day because she was told that the team from UK would have a solution to her deformity.

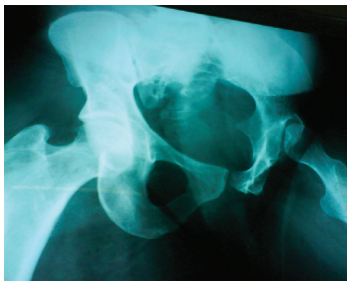

Figure 3. 20 year old woman with congenital dysplastic pelvis

Most of the patients who presented with severe knee osteoarthritis were ideal candidates for knee replacements but could not afford surgery. A few patients had asked for time in order for them to get the funds for surgery. I set up a waiting list for patients who would later have joint replacement on our next working visit. Total knee replacements were not being carried out at the hospital due to lack of adequate education and expertise on the part of local orthopedic doctors.

I managed most of the patients with knee osteoarthritis in severe pain with intra-articular steroid injections in the interim. A lot of patients with degenerative lumbosacral disc degeneration were booked for caudal epidural injections. Some patients I knew would benefit from spinal surgery in the form of spinal decompression and intervertebral fusion, but without a spinal surgeon on our team there was little help we could offer.

Surgical Exposure

The visit boosted my surgical experience. I was involved in assisting the consultant orthopaedic surgery in most of the operative cases. I closed the surgical wounds from subcutaneous tissue to skin under supervision. This boosted my confidence.

I was also closely involved in post operative care of the patients. Every day the consultant and I did a post operative ward round, which was quite alien to the local medical personnel. I remember taking some time educating the duty doctor and nursing staff the need for a ward round in order to identify potential post operative complications and manage them promptly.

Education

One of the major objectives of the Motec Life is to help train and educate the local staff. A few misconceptions have prevented effective patient care. One example is the issue of post operative mobilization of patients following hip surgery. The understanding of the nursing staff and a few of the physiotherapists was that post hemiarthroplasty patients should not be mobilized until a few weeks after surgery. There was no clinical reason for this but I gathered that one of the local surgeons had managed a patient that way in the past and so they thought this was standard practice. I explained that post operative instructions on mobilization of patients should be adhered to and that the purpose of the surgery was being defeated if the patient was kept in bed.

I also noticed significant drug errors. The inpatients did not have drug charts and so doctors would prescribe in the patient's notes and the nurses would copy out the prescribed

medications onto a treatment sheet and then administer the drugs. This led to a number of drug errors, such as a patient who was administered the wrong dose of antibiotics because the nursing staff had copied out a wrong dose. I highlighted this with both the local doctors and nursing staff and I was impressed with the response. I was asked to help design a drug chart and the management are looking at printing out this and introducing its use in the whole hospital. This single experience gave me a unique sense of satisfaction as my contribution to effective patient care in Koforidua Hospital in Ghana.

Editorial Comment

Our thanks are due to Dr George for this article. It illustrates the wide gap in international health provision, rationing of healthcare, opportunities for training and problems and solutions to issues like drug errors that are common to all health systems - unnecessary transcription and poor handwriting are major causes of drug errors in the NHS. These are issues in health provision that will be challenging us all in the 21st Century.