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2014 ELECTIVES AT ST MARY'S ORTHOPAEDICS

I undertook a six week elective at St Mary's Hospital in West London and was attached with the Trauma and Orthopaedics team. St Mary's Hospital is a part of the Imperial College Healthcare NHS Trust which also includes Charring Cross Hospital, Hammersmith Hospital, Queen Charlotte's & Chelsea Hospital and Western Eye Hospital. St Mary's is a general acute hospital that diagnoses and treats a wide range of adult and paediatric conditions. St Mary's hospital has pioneered the use of robotic surgery which includes the UK's first da Vinci robot for keyhole surgery. The orthopaedics department is based at Charring Cross and St Mary's hospitals which are world-renowned for hip and knee replacement and trauma reconstruction. Emphasis is placed on conservative and computer-assisted surgery. The surgical service at St Mary's is a physician-led model of care that links the health and social services to provide comprehensive care for patients. St Mary's Hospital is a major trauma centre providing an on-site consultant in orthopaedic trauma from 8.00am to 8.00pm along with 24 hour onsite team comprising a specialist registrar and senior house officer. St Mary's Hospital has daily trauma lists with dedicated post-operative trauma beds. With regards to outpatient facilitates, there is a daily trauma clinic with direct A&E access and also community doctors. There are also weekly clinics in foot and ankle, hip and knee including re-replacement, shoulder and elbow, spine, paediatrics and physiotherapy extended scope practitioners. Moreover, with regards to inpatient facilities there are separate trauma and elective beds.

How are orthopaedic services organised and delivered? How does this differ from countries without national healthcare?

Currently, orthopaedics is one of the largest surgical specialities. In the country, few specialist centres for elective surgery exist however the bulk of orthopaedic practice takes place in district general hospitals along with a general trauma service. The majority of orthopaedics units now have at least 5 consultants who develop a sub-specialty interest. In common with a number of surgical specialties the last 10 to 15 years have ushered in major developments; which involved minimally invasive surgery. There are now broad orthopaedic sub-specialty divisions ranging from microvascular surgery through to major revision arthroplasty of lower limb joints. Additionally, in the management of trauma patients, major developments have occurred which include the growing number of injuries treated operatively thus allowing rapid patient rehabilitation.

Patients which require urgent treatment for fractures can be referred to orthopaedic services following attendance at A&E; these patients are generally seen within one week at fracture clinics. Additionally, patients can be referred to orthopaedic services from their own general practitioner (NHS or private referral) and other centres via tertiary referrals.

In countries without a national healthcare there is a reduced/lack of infrastructure leading to inadequate orthopaedic service coverage. Thus only individuals who can afford healthcare will be treated. Contrastingly those who cannot afford to pay healthcare bills will not have timely access to appropriate orthopaedic care which could result in death and disability due to infections, permanent deformities, chronic pain, or immobility.

What are the prevalent orthopaedic conditions in west london and how do they compare with those in east london?

The prevalent orthopaedic conditions encountered include osteoarthritis (e.g. in hip, knee), dislocations (shoulder, radial head), fractures (low energy osteoporotic e.g. hip fracture, high energy fractures from road traffic accidents/falls), ligamentous/meniscal injuries (sports related, falls). These conditions are also encountered in East London.

To gain understanding of:
-case mix of orthopaedic patients that present to the hospital
-signs and symptoms orthopaedic conditions
-investigation and management of orthopaedic conditions

A variety of patients of all age groups with trauma and orthopaedic related conditions present to the hospital. I have seen the management of many cases that present to the hospital both acutely and chronically. Examples include fracture of the humerus, distal fibula and tibial plateau, also dislocation of the radial head in a child, tear of anterior cruciate ligament, knee and hip arthroplasty secondary to osteoarthritis and/or trauma. In the case of a child with radial head dislocation, the mechanism of injury was her mother pulling on her forearm to stop her from running across the road while waiting to cross. The symptoms the child presented with were sudden crying and pain with elbow slightly flexed and held against the body. The pain was centred around the radial head. On examination there was tenderness at the radial head with the child being reluctant to move and

apprehensive to move the elbow. An X-ray was carried out which ruled out a fracture and confirmed the diagnosis. The dislocation was managed with a reduction with the supination manipulation technique. Another case was an elderly lady complaining of unilateral left knee pain and joint stiffness which was worse on movement and weight-bearing. On examination she displayed antalgic gait, crepitus and reduced range of movements. She had an X-ray which displayed classical osteoarthritis features (loss of joint space, osteophytes, subchondral sclerosis and cysts. She had thus far been managed conservatively/medically (analgesia, physiotherapy, intra-articular steroid injections) and this failed to control her symptoms, she also communicated an impaired quality of life. Consequently she was consented for a total knee arthroplasty.

To gain understanding of orthopaedics as a career and research

Orthopaedic surgeons deal with injuries arising from trauma, congenital conditions, degenerative diseases, infections and tumours of the musculoskeletal systems using surgical techniques. As a career, the training pathway in trauma and orthopaedics is structured similar to other surgical specialties. Post-graduation and completion of FY1-2 years, aspiring surgeons complete core surgical training and apply for ST3 post in trauma and orthopaedics which is usually completed in 6 years. Upon completion trainees embark on a fellowship from which they apply to and take their consultant posts. Orthopaedic consultants in the UK spend about 40% of their time operating, both elective and trauma lists. The rest is divided between outpatient clinics (elective and fracture), on-call duties, administration, clinical governance and research/training. Orthopaedics is a highly varied specialty utilising a direct and practical approach to surgery which can produce rapid improvements in quality of life. As well as theoretical and practical aspects, orthopaedics offers an exciting interface with technology and industry.

Musculoskeletal problems pose multifaceted problems which are investigated in a multidisciplinary approach. The types of research opportunities in the speciality are diverse, ranging from basic cellular and molecular biology, bioengineering, biomechanics to clinical research.