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TRAUMA +
ORTHOPAEDICS

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(Word count 1200 max)

Introduction

India is a vast country with large and rapidly growing population and economy. While some of India is reaping the benefit of this economic success, much of the country remains poor. This poverty leads to higher levels of mortality and morbidity that that seen in the UK and it was the opportunity to work in this environment with such increased levels of pathology that led me to do a placement in trauma and orthopaedic surgery in Apollo hospital, New Delhi.

1. **Briefly Outline the healthcare system in India and compare it to the NHS**

Throughout India there is a network of national, government run hospitals. These are however, often far less comprehensive than in the UK. There are fewer hospitals per capita and the physician-to-population ratio in India is 50 per 100,000 (Development report, UNDP, 2007). Although there are 600,000 physicians registered in India the numbers practicing are probably far fewer due to immigration (Development report, UNDP, 2007). The training of Indian doctors is respected widely all over the world. However the resources they have to practice with are often limited in terms of both time and the drugs/equipment available.

Health care services in Indian are largely concentrated in urban arias. This means that patients in rural areas have farm less medical cover and may be forced to travel large distance to gain the services required. This puts a heavy financial burden on many, often poor, rural patients.

Services in specialities are provided by government hospitals including medicine and surgery. Although these are far less comprehensive than those found in the NHS or in Private hospitals in India.

There has been an increase in the number privet hospitals whose levels of care in terms of staff training, infrastructure and equipment are in some cases equal to those seen in the NHS. The cost of these hospitals is usually beyond the reach of most Indian citizens. There is some provision for treatment in private hospitals via private health insurance. This model is similar to the American system but only covers a fraction of the population.

The unfortunate truth is that good healthcare is still beyond the reach of most of India's population. Indians who have no insurance or other financial means must take what they can from the government run system or sacrifice a great deal to afford the private system. 6% of GPD is currently spent on healthcare in India which is far lower than in many western countries. The situation is improving and the rate of investment in Indian healthcare is increasing exponentially, although much of this is from the private sector (Healthcare in India, Emerging market report 2007).

2. Describe the common causes and presentations of patients to the orthopaedics department

Presentations to the orthopaedic department where split into two groups; elective procedures such as total hip replacements and trauma surgery such as ORIF procedures to repair broken bones.

Knee and hip joint replacements make up a considerable part of the surgeons work load. With a large population and increasing obesity, the need for joint replacement surgery is increasing rapidly. In the NHS treatment is free, whereas it can be very expensive for indicant citizens. This leads to surgeons often having to change their management plans to offer an operation that the patient can afford. Other routine operations include excising bone tumours such as osteosarcoma and with infections of the bone. Extra pulmonary tuberculosis is relatively common and requires surgical management of lytic bone lesions (Dhillon M, 2012).

Levels of trauma in India are very high. Although there are many health and safety regulations, they are not always followed. Road traffic accidents are a big problem in India and car safety levels are not as high as in the UK. Mortised rickshaws are a popular form of travel and a good example of a vehicle that provides little protection in a road traffic accident. Driving in New Delhi can often be erratic and the highway code is often difficult to enforce. There are fewer pedestrian crossings and many pedestrians are force to cross multilane highways on a regular basis. From a personal experience interacting with local professionals outside the hospital I found that the attitude to drink driving are far more relaxed than in the UK. This all leads to multiple daily presentations to hospitals such as Apollo with patients having suffered multiple, complex open fractures and dislocations.

Medical tourism is on the increase in Delhi as India is a regional leader in medicine. The relatively low cost of Indian health care thus makes it attractive to foreign patients seeking high quality care. A substantial percentage of patients at Apollo hospital came from outside India. There where a great number of patients from a number of countries and from as far away as Tanzania, Dubai and even Afghanistan. These patients usually came for elective procedures such as knee and hip replacements.

Much of the work done by orthopaedic surgeons is complicated by levels of poverty in India. Patients often present later than they would in the west, with more severe pathology, which often complicates their management.

3. Compare trauma and orthopaedics in Delhi and compare with London

The standard of equipment, training and hygiene in private hospitals in India is high. Many of the consultant surgeons and anaesthetists we met in Apollo hospital had trained in the UK and so much of the care provided was of the same standard as that found in the NHS. In the NHS, NICE guidelines usually dictate the standard of care. Although some prostheses available in the UK where available in New Delhi, sometimes lower grade parts such as metalwork where utilised to make the operations affordable. This can be a

difficult concept for those used to working in the NHS but is of course a practical reality for those wishing to provide the best care possible with the available resources.

Interestingly many operating theatres did not have dedicated anaesthetic rooms that are seen in many NHS hospitals. This lead to some delays as room cleaning and anesthetising patients could not run concurrently.

The standards of hygiene and equipment in we witnessed in government and charity hospitals was lower than that seen in private hospitals. Although the situation is improving it will take many years for standards to reach those seen in the NHS.

4. Briefly outline public health strategies in India

The problems of sanitation in India are grave. It is estimated that 638 million people are defecating in the open in India leading to high levels of bacterial and viral oral-faecal infection. Until such basic concerns as sanitation, clean water and adequate nutrition are solved; the health of the ordinary Indian citizen is likely to remain poor (UNICEF, 2012).

Levels of nutrition in India are highly variable with the middle classes having good levels of nutrition whereas large numbers, especially in rural areas, have a relatively poor nutritional status. Interestingly as India becomes more affluent obesity is becoming a problem leading to increase levels of diseases such as osteoarthritis and type II diabetes. In the coming decades the Indian government may have to role out programs such as the British "Fit for LIFE" program to counter this.

Only 88% of India's 1.2 billon people have access to clean water. This again produces a huge burden of disease. As well as poor sanitation, chemical contamination of water with chemicals such as arsenic have been reported (UNICEF, 2012). A clean water supply is vital for maintaining patient health and securing clean water for all India's population should be one of the government's main priorities.

Vaccination programs are a relatively low cost way of having a major impact on public health. Vaccination programs in India have been successful and in India polio has now been eradicated (Yadav A., 2012).

Summary

India is a county of great disparities. Levels of wealth and health vary rapidly from the affluent middle classes in the cities to the vast majority of poor in the rural areas. While great progress is being made, unless these differences are addressed good levels of healthcare will not be achieved. It will be interesting to see with India's rapidly expanding economy, how the healthcare system will advance in the coming decades.

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