Sana Ihsan 080381477 Hospital Kuala Lumpur

SSC 5C Elective Report

Elective Subject: General and Interventional Radiology

Location: Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Dates: 14/4/14- 23/5/14

Elective Objectives

1. **Describe the incidence of stroke in Malaysia and discuss this in the context of global health**

Malaysia is a rapidly developing country in Southeast Asia, divided in to two regions- one in the Southeast peninsula of Indochina bordering Thailand and Singapore and the other in Malaysian Borneo sharing land borders with Brunei and Indonesia. It is a multi-ethnic country consisting of 3 major ethnicities: Malays, Chinese and Indians. With the life expectancy rising in Malaysia and across the world, cerebrovascular disease (stroke and TIAs) incidence is increasing and of a growing economic burden due to its high impact on the quality of life causing disability.

In Malaysia, stroke is the third greatest cause of death [1]. Every hour there are approximately 6 new cases of stroke across the country [2]. There is currently no data on the recorded incidence and prevalence of stroke [3], however there is data from hospitals from different parts of the country each with different demographics. In a study conducted in the Northern state of Kelantan, there were 158 stroke patients admitted in a 24 month period; the demographics of the population of the study included 86.1% Malays and 13.9% Chinese, approximately representative of the population of the state. 56.3% of these patients had an ischaemic stroke, 36.1% had a primary intracerebal haemorrhage and 7.6% had a subarachnoid haemorrhage [4]. In another study, conducted in Penang hospital, 246 people admitted had a stroke in a 12 month period, the demographics of this population was 55.7% Chinese, 28.9% Malays, 14.2% Indian and 3% other. There was a 1.5 fold increase in the percentage of patients who had an ischaemic stroke (74.8%) compared with Kelantan; 25.2% of these cases had a haemorrhagic stroke [5]. These studies suggest that there may be genetic/ethnic pre-susceptibility towards different subtypes of stroke.

2. **Describe the pattern of health provision especially for stroke in Malaysia in contrast to the UK.**

The UK follows a two-tiered healthcare system with the National Health Service universal healthcare which is free for all British residents at point of access as it is funded by tax collected by the government. Alongside the NHS there is private healthcare which is funded by health insurance. This model of healthcare is closely followed by Malaysia in which there is universal healthcare in government hospitals and private healthcare. The difference however was that despite there being universal healthcare in Malaysia, some care often incurred a very small charge for procedures such as surgeries; the government would subsidise the rest of the cost.

In the UK, patients with a suspected stroke are sent to the nearest stroke unit for treatment, investigations and commencement of rehabilitation such as speech and language therapy, physiotherapy and occupational health amongst many more. After discharge, patients are followed up by their GP and the appropriate rehabilitation teams to promote independence and help improve

quality of life after stroke. This system is similar to Malaysia, however some stroke units may be far away and there are not as many government hospitals to provide the service. There are 7 stroke rehabilitation centres across Malaysia funded by NASAM (National Stroke Association of Malaysia) which is a non-profit organisation. The rehabilitation treatment they help provide stroke survivors includes physiotherapy, occupational therapy, speech therapy and counselling [1].

3. **Describe the Radiological protocol for investigating stroke (if at all) in Malaysia. What are the preventative measures for cerebrovascular disease in Malaysia**

There was no written protocol or local guidelines of stroke management or investigation. I spoke to the hospital radiologists who they informed me that they use the Malaysian Clinical Practice Guidelines (CPG) which are like NICE guidelines in the UK; they also use evidence from international journal articles and continually try to update their practice. In Hospital Kuala Lumpur, where I was based for my elective, there are 4 CT scanners (the newest of which is a high resolution CT scanner up to 64 slices) and 1 MRI scan (scans up to approximately 20 slices). By following international guidelines such as the UK, a CT scan is performed first as the first line investigation for stroke. When performing further radiological investigations for stroke, an MRI scan may be carried out for which the stroke protocol includes T1, T2, FLAIR, ADC and TRE images.

Malaysia has a national stroke awareness week which is an annual event with forums in town centres and chat shows in the media to educate the public about stroke, spread awareness and to encourage preventative measures such as adopting a healthy active lifestyle to reduce the risk [1]. This is comparable to the UK where there is a stroke awareness programme with the Act F.A.S.T campaign [6] [7]. This campaign has been particularly successful in educating the public as they have used television, newspapers, posters and billboards as a means to spread information of the signs of stroke (face, arms, speech).

4. **What did I learn from this elective and how will this impact on my career?**

I witnessed and experienced many things on my elective which I will take forward with me in my career. My elective was in radiology in both general and interventional radiology. In Malaysia, there is no comprehensive system such as PACS (picture archiving and communication system) in the UK where the scans of each and every patient is kept alongside the radiologist's report. Instead, there is a simple software which contains some MRI scans and some CT scans. The report is done separately on a private laptop belonging to the radiologist on a word document which is usually typed by one of the trainee radiologists whilst the report is dictated by the consultant or a team of trainee radiologists. This report is typed in English and then printed out to put in to the patient's notes or handed to the doctor who is looking after the patient. Many scans are films which are analysed by placing on to a light up white screen which was outdated many years ago in the UK. This is inconvenient as it is easy for scans to be lost or misplaced, often the scans fall off the white screen which is interruptive during reporting, furthermore the image cannot be enhanced. Overall, I found this process was not very time efficient as some reports would take 1 hour to complete, often causing the doctors to stay hours after their shift has ended.

From this I learnt that here in the UK we are very fortunate to have high-tech imaging available, reports are all computerised and can be accessed by staff anywhere within the hospital site which adds to convenience. For the radiologist reporting, in the UK we have voice recognition software

which “types” the report as it is verbally spoken; images can be viewed on multiple screens on any one time and enhanced in various ways to aid diagnosis.

During my placement, I helped to identify pathology and normal anatomical variations on films which is something I have never done before as I have only had experience in looking at images on computer screens. I found it difficult as you cannot zoom in, but it made me appreciate the skill the Malaysian radiologists have in identifying pathology with less resolution, a skill which is diminishing here in the UK as technology advances and newer more sophisticated techniques are implemented with time.

The things I learnt which are non-medical include basic Malay language, I have developed verbal and non-verbal communication skills in speaking to different members of the multidisciplinary team where there may be a language or cultural barrier.

Overall I had a very enjoyable time on my elective in Hospital Kuala Lumpur; I have had the privilege of meeting many new people from all walks of life, many with international work experience rich with wisdom and some who have just started on the career ladder. Their knowledge, enthusiasm and generosity in the workplace and beyond will stay with me throughout my career.

Bibliography

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[4] F. Jaya, M. N. Win, M. R. Abdullah and J. M. Abdullah, "Stroke Patterns in Northeast Malaysia: a hospital-based prospective study," *Neuroepidemiology,* vol. 21, pp. 28-35, 2002.

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