GENERAL MEDICINE

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SSC5c – Medical Elective Report

Elective supervisor: Professor Dato' Dr KL Goh

Elective Subject:- Gastroenterology, General Medicine, and Public Health

Elective Location:- 1 week in East Malaysia, Sarawak General Hospital, Kuching; 4 weeks West Malaysia, University Malaya Medical Centre (UMMC), Kuala Lumpur.

Elective Objectives:-

1) Describe the pattern of disease/illness of interest in the population with which you will be working and discuss this in the context of global health. **What are the most prevalent gastro and public health concerns in Malaysia? Do they contrast with what occurs in the UK and if so, why?**
2) Describe the pattern of health provision in relation to the country in which you will be working and contrast this with other countries, or with the UK. **How are the health services organised and delivered in Malaysia? How does it compare and contrast with the UK?**
3) Health related objective. **What is the impact of smoking in Malaysia? What is the biggest health concern in Malaysia? Compare and contrast as in objective 1.**
4) Personal/professional development goals. Must also include some reflective assessment of your activities and experiences. **What have you found most interesting during your elective placements in Malaysia. Have your experiences improved your knowledge in these topics? Have they provided a different insight of medicine? Have any of the elective placements provided you with enthusiasm to pursue them as a speciality in the future?**

Figure 1:- Plaque denoting the GI Endoscopy Unit at UMMC as a Centre of Excellence, awarded by OMED, World Organisation of Digestive Endoscopy

Introduction:

I chose to go to Malaysia to compare and contrast medicine in practice, and the differences in the presentation of disease, and prevalence in a tropical country. It was of particular interest to me as Malaysia is my country of origin, and having been trained in the United Kingdom (specifically the hospitals in the region of North East Thames; mostly in East London), and having also experienced healthcare in both countries (both as a patient, and a clinical observer), I was very curious to note the differences between them, with my knowledge as a final year medical student.

On a side note, it was interesting to arrive in Malaysia for my elective just before, during, and after the 2013 Malaysian general elections. While the political landscape was turbulent, apparently with the majority of Malaysians fervently hoping, and voting for the winds of change, the scales of power remained unperturbed, with the incumbent ruling party retaining their unbroken leadership of the country, since Malaysia's declaration of independence from the British Empire.
However engrossing this was to see unfold; ultimately, this had no apparent effect on medicine in practice during my elective.

Demographics:

Malaysia is a tropical country located around the equator, separated into two geographic locations by the South China Sea, known as peninsular Malaysia and Malaysian Borneo, or as West and East Malaysia respectively. It shares land borders with Thailand, Indonesia, and Brunei, and maritime borders with Singapore, Vietnam, and the Philippines (**Figure 2**).The capital city is Kuala Lumpur, with an estimated population of 28 million, with approximately 23 million people living in West Malaysia. Malaysia is a multi-ethnic and multi-cultural country, which plays a large role in politics. Islam is constitutionally the state religion, and freedom of religion is also protected by constitution.[10, 33]
In East Malaysia, Sarawak General Hospital, located in Kuching, the capital of the state of Sarawak, is a tertiary hospital catering to the population of Sarawak.
In West Malaysia, UMMC, located in Kuala Lumpur, the capital city of Malaysia, is the national tertiary referral centre for Malaysia.

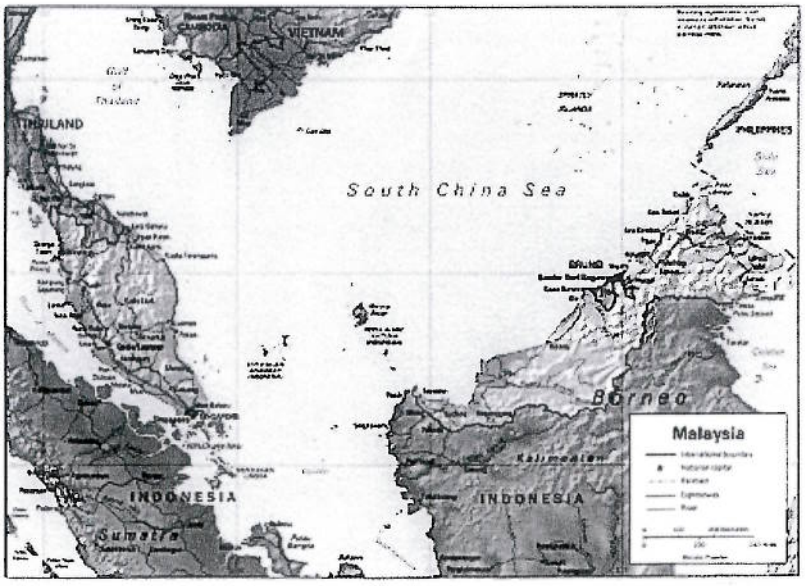

Figure 2:- Map of Malaysia

Public health and Health Concerns:

With regards to public health in Malaysia, it was readily apparent that Type 2 Diabetes Mellitus (T2DM) is a major problem in both East and West Malaysia, where 1 in 5 people over the age of 30 suffers from T2DM and its co-morbidities.[2, 25] Smoking is also a major problem in Malaysia, with an estimated figure of 1 in 2 of the adult Malaysian population are reported to smoke tobacco (92% male, 8% female), 85% of which smoke daily.[21, 33] Smoking in teenage males is also one of the worst in the world, with 1 in 3 teenage males that smoke.[17]
T2DM and smoking are also major public health concerns in the UK, although public health campaigns, and the ban on smoking in enclosed work places in 2007 has helped the UK achieve the world's largest reduction in deaths from lung cancer.[26, 27, 28, 30]

Dengue fever; a mosquito borne viral infection, is the most common tropical disease in Malaysia (approximately 11,000 cases annually in Malaysia, 1-2% of cases being fatal), with higher infection rates in rural areas.[1, 9, 32] While Dengue itself is rarely fatal, Dengue Haemorraghic Fever (DHF) and Dengue Shock Syndrome (DSS) present major complications, both having mortality rates <1% to <5%, and with DSS occasionally having rates as high as 44% with regard to established shock.[12, 24] Dengue fever is a common differential for Pyrexia of Unknown Origin (PUO) in Malaysia, as it can affect any system from the meninges, to the liver; comparable to the differential of Tuberculosis (TB) in East London.
TB however, like in East London, is very common in Malaysia, with the mean annual prevalence reported to be 101 per 100,000 in 2011 by the WHO, ranking 83 out of 191 countries in the world.[15, 16, 18]

With regards to Gastroenterology in West Malaysia, Hepatitis B and Hepatitis C is endemic in Malaysia, responsible for the majority of cases of liver disease in Malaysia, unlike the UK. Alcoholic liver disease is much less prevalent in Malaysia compared to the UK, largely due to the population being predominantly Muslim (where it is forbidden to consume alcohol), and as a result, a smaller proportion (mostly ethnic Indian) that partake in alcohol excess. However, it is interesting to note the ethnic differences in the causes of liver disease; where alcohol consumption accounts for around 50% of cases in the ethnic Indians, whilst Hepatitis B and C are the predominant causative factors in liver disease in the ethnic Malays and the ethnic Chinese.[2, 5]

H.Pylori infection is also relatively low in West Malaysia (higher in people from the state of Sabah, in East Malaysia).[11, 22] As with the rest of the world; *H.Pylori* may be detected in 90% of cases with peptic ulcer disease, but less than 15% of individuals already infected with *H.Pylori* may have this disease.[13]

Inflammatory Bowel Disease (IBD) such as Crohn's disease and Ulcerative Colitis are extremely uncommon in Malaysia, in contrast with the UK, and predominantly occurs in ethnic Indians in Malaysia. This could largely be attributed to variances in population risk factors.[4]

On a side note, with respect to the numerous emerging hypotheses on the correlation with vitamin D and health, it is interesting to note that similar to the UK, there is widespread vitamin D deficiency in the Malaysian population, despite the blazing tropical weather and consistent levels of sunshine. This may be attributed primarily to cultural and religious differences, where sun avoidance to maintain a fair complexion is culturally preferable, and Muslim women commonly dress conservatively.[3, 4]

The incidence of cancer in Malaysia is estimated to be 1 in 4 by the age of 75, with a WHO incidence of 119 per 100,000 (with the UK's incidence being higher at 155 per 100,000).[7, 19, 35] It is estimated that 40% of all cancers are preventable (including bowel, lung, and cervical cancers).[23] Bowel cancer is the second most common form of cancer in Malaysia, although earlier detection (colonoscopic screening) and treatment leads to better survival rates.[8]

In relation to the high rates of smoking, tobacco exposure, and T2DM in Malaysia, they contribute significantly to a host of avoidable risk factors including: poor diet, inadequate exercise, sedentary lifestyle, alcohol excess, and obesity. This long term consequences of this were evident from the patients seen on the wards, most of which had been exposed to a number of those avoidable risk factors.

In terms of diseases that I saw on the wards, clinics, and in procedures, they were mostly similar to the diseases and conditions I have encountered in East London, such as: COPD, T2DM (and all of its sequalae, including MI, stroke, chronic renal failure, neuropathy, etc). However, the almost all the patients I saw on the wards were in much more advanced stage of disease that I have seen in the UK. This could be due to issues such as health education, funding, or that the most complicated cases were typically referred to the tertiary health centres such as UMMC (exemplified by seeing 5 cases of scleroderma in gastro ward, in one week). Tropical diseases were fairly common in Sarawak General Hospital, including cases of dengue, typhus, and typhoid fever. In the gastro wards in UMMC, many of the patients were in the late stages of their disease (calculated by their Child-Pugh score in the case of liver disease), almost all of which were hepatobiliary in origin (e.g. oesophageal varices as a sequalae of portal hypertension).

On impression, by and large the biggest health concern in Malaysia would be T2DM (**Figure 3**).[25] This is of a particular problem in Malaysia due to the diet and lifestyle, and where eating is considered to be the country's favourite pastime (in contrast to the UK's favourite pastime of alcohol consumption). Moreover, almost all the local delicacies are very high in carbohydrates and very low in fibre, with the drinks and desserts typically being very high in sugar content as well. It was also interesting to note that foods promoted to represent a healthy and balanced diet were extremely hard to find in Malaysia, and could usually be found in areas targeted towards the expatriate population in Malaysia.

Figure 3:- Health advice regarding T2DM painted along the walls of Sarawak General Hospital

Health service organisation and delivery:

The healthcare system in Malaysia employs a split public and private healthcare system, with quotes of 20-30% of healthcare belonging to the private sector, and in some cases as high as 50% (especially in primary care).[6, 34] People of higher socio-economic classes typically use private healthcare exclusively through health insurance or personal/family savings (until financial exhaustion – necessitating transfer to public healthcare), whilst lower income earners typically use public healthcare, but may also seek private primary care – General Practitioners.[20]

Unlike the UK where almost all consultants in private practice are also employed by the NHS, the vast majority of specialists that work in the private sector in Malaysia do so exclusively, and many allegedly employ a "service for profit" framework. It is a commonly acknowledged issue in Malaysia, that there is great difficulty in retaining well-trained and highly skilled specialists in the public healthcare system.[31] UMMC has opened a private healthcare wing in the hospital to offer their professors and consultants opportunity for private practice, whilst retaining their university hospital job, similar to the system in the UK.

Overall, the structure of public healthcare is broadly similar to that in UK, and within the region of Southeast Asia, the public healthcare system in Malaysia is considered to be very good. However, it is far less centralised due to split in public and private healthcare.

Public healthcare in Malaysia, in contrast to the NHS, is not fully subsidised by the government and taxes, with Malaysia's tax rate being substantially lower compared to the UK. Patients who use public healthcare must pay nominal administrative fees (which is lower for civil servants), and in some cases, pay for treatment, although this is usually subsidised heavily by the government.
University hospitals however, despite being tertiary referral centres, function as semi-private institutions in Malaysia, where the financial burden is placed predominantly on the patients and their relatives, but financial aid from the government and in some cases, pharmaceutical companies, can be provided for, on a case by case basis. Civil servants also receive reduced healthcare fees in University hospitals.

Both the hospitals I attended during my elective were tertiary health centres, with Sarawak General Hospital being the state tertiary referral centre in Sarawak, and UMMC being the national tertiary referral centre, with the endoscopy unit having received the prestigious award from OMED as a world recognized Centre of Excellence (**Figure 1**). As such, it is unsurprising that I saw a very high number of rare diseases, and complicated cases, a fair number of which were referred out of private healthcare institutions.

Another interesting aspect I noted regarding healthcare in practice in Malaysia, is that most clinicians are conversant (at least to a basic level) in multiple languages due to the multi-ethnic demographic of Malaysia. Although Malay is the national language, it is not uncommon for Malaysian citizens to be preferentially conversant in their ethnic language, and may not be able to communicate meticulously in Malay or English. This was much more pronounced in East Malaysia, where the ethnic diversity is much greater than in the capital, Kuala Lumpur. All clinicians however, are fluent in English, as English is used as the standard language for medicine in Malaysia.

Reflection:

One of the aspects I found rather interesting during my elective was the political landscape, stirred up due to the 2013 Malaysian general elections, although as mentioned above, it apparently had minimal impact on healthcare during my time in Malaysia.

I found it very interesting to return to Malaysia, and compare and contrast healthcare in practice, having been trained in East London. I found the public health issues particularly interesting, as they are broadly the same as in the UK, but due to cultural, religious, environmental, and ethnic differences, the challenges to public health are different. This applies particularly to Malaysia's favourite pastime of eating, and their dietary preferences, perhaps a direct parallel to Britain's favourite pastime of alcohol consumption.

It is also interesting to note that many of the diseases I saw in Malaysia, and in a sense, the demographics, were quite similar to that in East London. However, many of the patients that I saw in the two hospitals I attended in Malaysia presented with very advanced disease, with many or all the late to end stage clinical signs. While I found this to be very good for my learning (in general medicine, gastroenterology, and public health), it was distressing for the patients, their family and relatives, and also to me.

Another striking issue that resonated within me was the contrast between the NHS and the healthcare system in Malaysia. Having seen how different things could be without the NHS, I realise how good the NHS is in contrast to a system that employs a split public and private health system, such as that in Malaysia.

Having witnessed and observed gastroenterology in practice, in a world recognized centre of excellence, I have found gastroenterology in Malaysia to be a fascinating speciality, in contrast to the gastroenterology in the UK, which is dominated by alcoholic liver disease and NASH (Non-Alcoholic Steato-Hepatitis). I also been very privileged to witness Professor Goh and his team perform numerous endoscopic procedures including: PEG insertions of the (pull-through and push-through techniques), BRAVO, POEM follow-up endoscopy, ERCP, endoscopic variceal repair (including use of cyanoacrylate), gastroscopy and CLO-test, and gastric and colon cancer screening. I also witnessed the use of a Fibroscope, a new, non-invasive form of imaging to measure the elasticity of the liver, to investigate cirrhosis, but only for causes mapped out in the existing database.

Overall, I have found my elective in East and West Malaysia to be a most enlightening experience, and I am extremely grateful to Professor Goh and his team, and the other medical teams I have been fortunate enough to shadow. I would strongly recommend future students from Barts and The London to go to Malaysia for their elective, and taste Malaysia – Truly Asia.

Resources:

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