GASTRO

Barts and The London School of Medicine and Dentistry
MBBS SSC5c – Medical electives

Elective report

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It would be appreciated if the supervisor can complete the assessment of this report and reply to the student and Student Office at mbbs-year5-admin@qmul.ac.uk by 20th of May 2011. Please use the form Appendix 3

Elective objectives

1. What are the prevalence and incidence of liver disease in Malaysia? How do these differ from the rest of the world? What are the factors influencing such pattern?
2. What are the healthcare services and treatment modalities available for patient with liver diseases in Malaysia? How do these differ from the rest of South East Asia and the UK? What are the reasons if there is any difference?
3. What are the public health interventions in place for the prevention of liver diseases in Malaysia? How do these differ from the UK?
4. What are the psychosocial factors involved in patients with liver diseases in Malaysia and in the UK? How do I use this knowledge in interaction with patients and giving them the best care available?

There are different types of liver diseases. The commonest three will be used for discussion in this report; hepatitis B, hepatitis C and alcoholic liver disease. This is because they usually represent the majority of liver diseases in any region.

4.7% of the Malaysian population is estimated to have hepatitis B infection at anytime [1]. For hepatitis C the figure is 2.3% [2]. The global figure is higher for hepatitis B where a third of the world population are estimated to be infected either presently or in the past [3], whilst for hepatitis C it is closer at 3% [4].

Malaysia is located in South East Asia, an area with high incidence of viral hepatitis. Hepatitis B prevalence for individual countries in this region is 8% or more [5]. Other areas with similar prevalence include Far East (China, Taiwan, Korea), Western Pacific (Fiji, Samoa Islands), Central Asia, Sub-Saharan Africa, parts of Eastern Europe, and Alaska. Areas that are classified as having intermediate prevalence (2% to 7%) include Indian Subcontinent, the Middle-East, Northern Africa, Russia, Japan, and Southern Europe. The rest of the world (North America, Western and Northern Europe, Australia, New Zealand and South America) have less than 2% prevalence [5].

For hepatitis C the Far East (including Japan), South East Asia, and Western Pacific (excluding Australia and NewZealand) have higher prevalence figures, between 2.5% to 10%. Mongolia and Egypt notably have more than 10% [6].

Alcoholic liver disease shows reverse pattern to the viral hepatitides described above. It is higher in the West and developed world. It is difficult to get prevalence data, however it can be estimated from the level of alcohol consumption. This is based on the finding that 90% of chronic alcoholic drinkers develop fatty liver, and around 5% to 15% of these patients will develop cirrhosis [7]. Therefore areas with high levels of alcohol consumption would have higher prevalence of alcoholic liver diseases. These include North America and Western Europe [8]. In Malaysia, there is no data available but it is believed to be very low, and seen mainly in the Malaysian Indians.

I did an observation on admissions to hepatology unit at a tertiary hospital in Malaysia. During a four week period, viral hepatitides are the commonest cause for liver related admission. 45% of the patients have either hepatitis B or C diagnosis. Only 10% of the admissions are attributable to alcoholic liver diseases.

If alcohol consumption can explain the variation in alcoholic liver disease prevalence across the globe, it is more difficult to explain the hepatitis B and hepatitis C patterns. It could be hypothesized that the viruses originate from the endemic regions and have not moved away due to their mode of transmission that requires close contact and contact with blood and bodily fluid. Furthermore majority of patients are infected vertically from their mothers or in early childhood and remain asymptomatic until adulthood, when they might have already passed the virus to their offspring. This could be supported by the observation that in non-endemic areas both diseases are mainly seen in the ethnic groups that have migrated from endemic areas. The other affected groups are those at higher risk of contact with blood and bodily fluid, for example injecting drug users and men who have sex with men.

My observation on liver related admissions also reveals that majority of hepatitis B (80%) and C (90%) patients are either Malay or Chinese whose ancestors came from endemic areas. Only 2 out of 10 admitted Indian patients are diagnosed as having hepatitis B or C. On the contrary, 5 out of 6 alcoholic liver disease patients are Indians.

The low rate of alcoholic liver disease in Malaysia could be explained by a number of factors. Heavy alcohol intake is seen mainly in the Indian population. That said, there is only a small proportion of Indians who drink heavily. Adding to the equation, Indians only constitutes about 7.5% of the total population [9]. Malays which make up around 54% [9] of the population are mainly Muslims and therefore abstain from alcohol. It is also not part of their culture. In the Malaysian Chinese population, alcohol is tolerated however heavy drinking is a not as common as seen in the Indians. Indians also tend to consume stonger drinks like *samsu* (a spirit) and toddy (a palm wine).

Another factor that may contribute to low alcoholic liver disease in Malaysia is government policy. In Malaysia, alcohol advertisements are banned from broadcast media and billboards [10]. Alcohol consumption by Muslims is an offence and carries significant penalties.

In Malaysia, liver disease patients are able to have best available treatment. Antivirals, biological agents, transplant facilities and expertise, diagnostic modalities, and specialised liver units with specialist lead care are all available to those who might require them. However access can be problematic. Although provision of care is not means tested (at least in the public sector), lack of facilities and professionals mean that there will be patients that have their care unnecessarily delayed, although the size of the problem cannot be ascertained. Similar scenario occurs in the rest of South East Asia since almost all of the countries in this region are still developing. In the UK there are more specialised liver units and transplant facilities [11], however there are still shortage of service.

In general, there are fewer doctors and fewer hospital beds per patients in South East Asia compared to the UK. The UK spends bigger percentage of their gross domestic products in healthcare than any of the South East Asia countries [12]. Furthermore, the emphasis of healthcare in each country is different. In Malaysia for example, trauma, road traffic injuries and infectious diseases form a significant proportion of morbidity [13]. Whilst in the UK, cardiovascular disease and cancers are big contributors to mortality [14]. This difference in main disease patterns decides the focus of care provision.

The type of public health intervention for liver disease depends on the commonest aetiologies in each country. In Malaysia Hepatitis B vaccination is given to all infants as recommended by the WHO and is incorporated into the vaccination schedule. The 3rd dose coverage in Malaysia is estimated at 85.37% [13]. This universal vaccination is not practiced in the UK because of low prevalence of hepatitis B. Instead the UK opts for vaccinating at risk infants (born to known hepatitis B mothers or immigrants from endemic countries). The practice of vaccination at risk individuals (for example contacts of known case and health care professionals) exists in both countries, as also screening for liver cancer for at risk individuals. One intervention that exists in the UK but not in Malaysia is various campaigns to help people stop drinking alcohol.

Some of the social factors affecting liver disease (culture & religion effects on alcoholic liver disease) have been explained previously. Knowledge on this is not only useful in forming a clinical picture to assist with diagnosis, but also in formulating holistic management. Giving consideration to psychological factors (stress, depression, self motivation) is important particularly in management of drug overdose liver injury, and also in management of patients who are newly diagnosed with chronic conditions like liver cirrhosis and cancer.

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