Hannah Judd. Barts and The London Medical School.

SSC 5c Elective report

What is the balance between infectious disease and preventable disease in Zambia? How does this differ from the UK?

Infectious disease is much more prevalent here in Zambia than in the UK. From my experience in Livingstone General Hospital infectious disease makes up around 80% of hospital admissions in general internal medicine and paediatrics. I was expecting this to be the case, but was surprised to find the numbers of people being admitted due to preventable or lifestyle diseases is increasing. In particular alcoholism and hypertension are very common here and are steadily increasing, leading to liver cirrhosis, ischaemic heart disease, heart failure and strokes. The remainder of cases consists of malnutrition, trauma and congenital abnormalities.

The most common infections in Zambia by far are opportunistic infections (OI) in HIV, such as tuberculosis (TB), pneumocystis jiroveci, Cryptococcus neoformans and toxoplasma gondii, closely followed by malaria and gastroenteritis. Both TB and HIV are common in parts of the UK (eg East London) but the link between the two is not as strong and the prevalence of OI in HIV is much lower. From discussions with local doctors here in Zambia it has become clear that cases of malaria are on the rise for reasons unknown, and the strain here is worryingly plasmodium falciparum. Screening and treatment of children is now of paramount importance for any child that is brought to the outpatient department.

How are resources organized to deal with infectious disease? How do they differ from the UK?

It is difficult to comment accurately here on the resources available, however it is clear that restrictions in management are purely due to lack of resources. I have seen some evidence of posters and advertising used to educate people on the spread of infectious disease and I have seen how antibiotics, antivirals and antifungals are used in combination to help combat infections here.

In the UK our health advertising campaigns are focused on lifestyle advice the recognition of unhealthy living. Here in Zambia the emphasis is on prevention of spread of HIV, with walls being painted with 'The ABC of HIV': abstain, be faithful and use condoms. This is combined with regular screening for everyone every three months. This is in contrast to the UK where regular screening and such widespread education for HIV does not take place. Whilst I was surprised to see increasing number of patients with ischaemic heart disease and hypertension on Zambia, I was pleased to see posters also encouraging healthy living. I did feel that the issue of alcohol abuse and alcoholism has not been fully addressed and I have yet to see any anti-drinking campaigns.

The treatment resources and regimens for infectious disease differ greatly to the UK. There is a severe lack of investigations so pyrexia is often treated blindly with a combination of strong, broad spectrum antibiotics, alongside antivirals and antifungals to treat the most likely causes. Due to this blind

treatment and occasional lack of antibiotics needed to complete a full course there are unfortunately increasing rates of resistance. Without the ability to carry out blood cultures or histology within a short time frame this issue may well continue to progress.

To learn first-hand the treatment and management options for HIV. To be familiar with the complications associated with HIV infection.

In the UK it is rare to come across HIV and OI in general medicine so I was excited to have the opportunity to learn more about the disease and its management. As mentioned before, regular screening for all takes place unlike in the UK. When a patient presents to hospital they are tested for HIV if clinical suspicion indicates a possible OI, for example, patients presenting with signs of meningitis or a lower respiratory tract infection.

If a patient is diagnosed with HIV they are counseled on the importance of taking their medication, the spread of HIV and how to reduce the risk of transmission and to enroll the patient in a programme to check their CD4 count and response to treatment with their local clinic. It is important to note there are only two possible treatment regimens here – a first line and a second line. From the experience I have had, if a patient is on the second line and is showing signs of treatment failure, there appears to be little else to do for the patient other than treat OI and provide symptomatic relief.

With regard to the complications, TB is by far the most common. During my time here I have also come across pneumocystis jiroveci, CMV retinitis, kaposis sarcoma and meningitis. For the case of meningitis I saw the cause was unknown, although toxoplasma, Cryptococcus and TB were all suspected. Seeing these cases has been excellent revision for me however the treatments offered are somewhat different to the UK. As mentioned before, due to the lack of investigations, combination therapy is started. This is something that I will have to look at more when I return to the UK.

To rely more on clinical judgement rather than tests and investigations to improve my diagnostic skills.

This objective is difficult to write about as it is more of a practical objective I set myself. I respect the doctors here for the work they do without having access to test we consider routine back home – like electrolytes, blood gases, blood cultures and imaging. Whilst my own clinical skills have improved since I have been here I am glad to be returning to the UK with the backup of the investigations before treatment can be commenced.