TROPICAL MEDICINE

Elective Report – Northern Provincial Hospital, Luganville, Espirito Santo, Vanuatu 2011

1. *How prevalent are infectious diseases in the population of Vanuatu. How does this differ from the rest of the world, in particular the UK?*

Very few records of infectious disease rates are kept in Vanuatu and it is therefore not possible to give an accurate and objective assessment of the burden of infectious disease, however there is no doubt that it is an important cause of morbidity and mortality. Many of the conditions seen are similar to those seen in the UK, for example pneumonia, gastroenteritis and cellulitis. However, due to the remoteness of many people the conditions were often significantly advanced at presentation. For example one child on the paediatric unit had presented with meningitis with decorticate positioning.

In addition to these more familiar infectious diseases tropical diseases also make up a large part of presentations to medical services. Not least in these is malaria which was common in both adult and paediatric populations. Many people in Vanuatu come into frequent contact with the river, men working, women washing and children swimming. For this reason Weil's disease was an important differential in many individuals. One individual I saw in clinic was given a provisional diagnosis of Weil's disease and was given treatment on the basis of the clinical suspicion. Unfortunately I do not know the result of her diagnostic test.

In the paediatric population tropical ulcers (or Yaws) are endemic. It is a chronic skin infection caused by the bacteria *Treponima pallidum* subspecies *pertenue*. Most commonly ulcers were seen in the gaiter area of the legs. They are painless; however, multiple ulcers are often present. The ulcers take several months to heal and the open wounds offer an easy route for other bacterial infections which can cause further breakdown of the ulcer and a lot of pain. The condition is easily treated with penicillin, however once I was familiar with it I saw many individuals outside of the hospital with the condition.

2. *How is healthcare provided in Vanuatu, does this differ significantly from the UK? How does disease burden influence healthcare provision?*

The major difference between the healthcare systems in Vanuatu and the UK is payment. Patients in Vanuatu have to pay up front to see a doctor and pay further for diagnostic tests, treatments and for any inpatient stay. This may have been partly responsible for the advanced nature of many of the presentations. In addition treatments for chronic diseases were often interrupted as people are unable to afford medication which was mostly imported and very expensive.

There are no primary care facilities on Espirito Santo; patients self-refer to the hospital clinics. However, there are a number of community clinics offering specific services. This includes malaria testing, with rapid tests and treatment courses being available at a number of centres in the community. In addition maternity clinics are conducted at a number of remote sites at regular intervals with the staff journeying from the town to the clinic. These services offer regular healthcare to people who may find the journey to Luganville impossible.

There are very few doctors in Luganville, only five or six staffing the hospital and all of them trained abroad. However, there are many Ni-Van nurse practitioners who play an important role in the healthcare system, often treating patients independently. Chronic diseases, such as diabetes and chronic pulmonary obstructive disease (due to inhalation of indoor cooking fire smoke) are common and patient education often falls to the nurse practitioners, as it often does in the UK.

It is worth noting that Luganville was the site of the main hospital for the northern islands of Vanuatu. Most of the surrounding islands have no medical facilities and it is common for patients to make a boat journey of several hours and occasionally days to attend the hospital!

3. *How is malaria prevented, diagnosed and treated in Vanuatu?*

As previously mentioned malaria is a very common condition in Vanuatu. There are no large public health campaigns to educate people about malaria prevention, possibly due to the population being dispersed in remote areas, and bed nets are not commonly used. However, there is good awareness in the population about the symptoms of malaria, especially in the town.

Malaria is the most commonly considered diagnosis for patients with a history of recurrent fevers or a long generalised illness. Many patients often attend clinics worried about malaria and are able to have rapid malaria tests in the community if they wish. The rapid tests detect high titres of falciparum parasites and vivax, however, they do not detect ovale. Often patients are treated for malaria even if the rapid tests were negative. Blood films can be examined for malaria parasites in the hospital pathology lab. The standard treatment for malaria is a three day course of combination cholorquinine and sulphadoxine-pyrimethamine.

4. *What did I learn about the provision of healthcare in an aid mission?*

Unexpectedly I was lucky enough to witness an aid mission during my elective. The Pacific Partnership is an annual aid deployment of the US Pacific Navy fleet with contributions from other pacific nations, such as Australia and New Zealand. They visited Luganville for ten days and a large part of their mission was healthcare.

They ran six days of free clinics in the hospital and three days of remote clinics. All treatment provided by them during that time was free of charge. It was very interesting to see such a large mission in action; over 6,700 patients were seen for both medical and dental problems. In such a situation the provision of healthcare changed dramatically. The US team had brought all resources with them as medications were in limited supply and it was only possible to give prescriptions for up to a week, or one item for example one inhaler. Due to this chronic disease could not often be adequately treated in such clinics and due to the volume of patients seen it was difficult to educate patients in such a short space of time.

However a large effort had been made to incorporate local health provision services into the mission which ensured that these patients did not lose out. Copies of all records of patients seen in the hospital were given to the hospital to ensure continuity of care and some patients were referred back to the hospital clinics the following week. Additionally education leaflets in bislama, produced by the local hospital were provided to patients in the clinics.

The remote clinics offered a real glimpse into aid medicine. There were no diagnostic tests beyond rapid malaria and HIV tests and capillary blood glucose sampling. Diagnoses had to be made on the basis of the clinical picture. Both at the remote and hospital clinics, necessity became the mother of invention. At the remote clinics metronidazole tablets were crushed with the bottom of a torch and put into wounds prior to dressing as there was no antibiotic ointment available. At the hospital clinics as the days passed medications began to run out and chloramphenicol eye drops had to be prescribed to treat otitis media.

I have always had an interest in aid medicine and disaster relief but had not expected to gain any experience in the field until much later in my medical career. Whilst the experience is unlikely to be relevant in my first few years of practice I know that it will be valuable to me in the long run.