INFECTIOUS DISEASES

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Elective report - Singapore General Hospital - Infectious Diseases

1) What are the prevalent infectious diseases in Singapore and how do they differ from the UK?

During my time in infectious diseases in Singapore, I have been lucky to see a large variety of cases. Some of the most prevalent infectious diseases in Singapore are listed below.

Tuberculosis
Pneumocystis jiroveci pneumonia is a common opportunistic infection
Human Immunodeficiency Virus
Prosthetic joint infections
Melioidosis
Staphylococcus bacteraemia
Herpes simplex virus
Cytomegalovirus

This shows similarities and differences when compared to the UK. For example during my infectious diseases Student Selected Component in the UK, I mostly saw patients with HIV and pulmonary TB, however in Singapore, it seems infectious diseases as a specialty covers a broader range of infections. Prosthetic joint infections for example, were not routinely dealt with by the Infectious diseases team in the UK; the orthopaedics department would more likely take advice from microbiologists. However in the UK many of the Infectious diseases team also overlapped with the genitourinary medicine team in dealing with Sexually Transmitted Infections for example.

2) How are Infectious diseases services organised and delivered? How does it differ from the UK?

In Singapore, patients can be referred to Infectious Diseases by their community physicians, through Accident and Emergency or by another team that the patient is under the care of.

The ID team cover:
Wards
Referrals / consults
Clinics including travel clinic
Haematology
Burns
Transplant team
Antibiotic stewardship program

Patients can also be referred to OPAT (out patients antibiotic therapy) which is run by trained nurses. Here specific antibiotics can be administered intravenously when patients require long term antibiotics (minimum 2-4 weeks), but do not otherwise need to be admitted in

hospital. Some require patients to come to the unit daily (eg. Amikacin, Ertapenem, Gentamicin, Ganciclovir) but for others, patients can be counselled and taught to operate continuous antibiotic infusions (eg. Vancomycin, Cefepime, Ceftriaxone, Flucloxacillin). These are replaced every 2 or 3 days and blood tests are done weekly. This cuts down on the need for patients to remain as inpatients and cuts costs.

Healthcare funding:

In Singapore, patients fund their healthcare privately through co. payment schemes such as Medisave, or other private coverage. A proportion of working people's salary goes to their Central Provident Fund which includes Medisave and Medishield (insurance scheme). Depending on these, and patient preference, patient's care is categorised into class A, B1, B2 and C. This gives the patient different allocations in terms of private rooms, facilities such as TV and air conditioning for example. Medical social workers assess poorer patient's family/social background, financial condition and Medisave/other resources to see whether they would be eligible for Medifund (government funding). These patients receive class C care.

If the patient runs out of money in their Medisave, they can also use their children's funds. As patients are only allowed to use S$450 dollars per day from their Medisave, they have to pay any excess costs themselves. If patients choose class A or B1, they will not then be eligible for Medifund funding if they get into financial difficulty. This can be an issue when patients choose a higher class, but end up staying in hospital longer than they expected, increasing their costs.

Differences to the UK:

Infectious diseases patients are scattered all over Singapore General Hospital and there is not one dedicated ward. This is due to a variety of reasons including the class system and the fact that Infectious diseases patients' care is often shared with other teams for example surgical. However the isolation ward is considered essentially the Infectious diseases ward.

The National health service (NHS) in the UK means that within state hospitals, all patients are treated equally, irrespective of their financial and social background. This cuts down on some issues as there is no class system so all patients should receive equal care. However, a lack of funding for the NHS often means treatments/tests cannot be performed due to cost restrictions, which is not normally the case in Singapore.

There is no OPAT in the UK so patients have to stay in hospital quite a lot longer for intravenous antibiotics, putting them at risk of hospital acquired infections.

There is no Antibiotic Stewardship Program in the UK. In Singapore, pharmacists review/audit the prescriptions of specific antibiotics each week day with an Infectious Diseases consultant, for example Levofloxacin, Tazocin (Piperacillin+Tazobactam), 4th generation Cephalosporins and Carbapenems. Though physicians try and restrict use of certain antibiotics in the UK, there is no specific assessment of this. This program has however been shown to reduce morbidity and save on costs.

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Hepatitis B and C are treated by the Gastroenterologists in Singapore, whereas Infectious Diseases would manage this in the UK. Conversely, Infectious Diseases physicians are not routinely attached to the transplant team in the UK.

3) Gain an understanding of diagnosis and management of conditions/diseases not commonly seen in the UK.

I think for me, the most interesting part of this placement has been the opportunity to learn about diseases/infections that I had not seen or in some cases even heard about previously. For example;

Non Tuberculous Mycobacterium
Miliary Tuberculosis
Central nervous system tuberculosis
Tuberculous abscesses
Melioidosis
Pneumocystis jiroveci pneumonia
Cryptococcus gatii meningitis
Marantic endocarditis and Trousseau's syndrome
VRE - vancomycin resistant enterococcus
Klebsiella liver abscess
Non albicans candida
Malaria Falciparum
Brucellosis as a differential for Tuberculosis
Pre-liver transplant patients

Through seeing patients on the wards and in clinics, grand round presentations and general discussions within the team, I now have a greater appreciation of the spectrum of conditions seen in countries such as Singapore in comparison to the UK.

4) Explore Infectious Diseases as a career

Infectious diseases as a specialty seems to vary in its specific roles in different countries, however this placement was still extremely useful for me to explore Infectious diseases as a career. I enjoyed the fact that the team had patients from all different specialties, and had to work with many different teams to coordinate patient care. It was also rewarding to see how patients improved following treatment or withdrawal of treatment by the Infectious Diseases team (eg. drug reactions). The variety of cases, the fact that it is a developing field and the problem solving aspect certainly attracts me to Infectious diseases as a career.