MINH LVU
ENDOCRINOLOGY

Minh at Harbor-UCLA Medical Center, May 7 2012 – May 25 2012

**Objectives in bold.**

**What are the prevalent endocrinological conditions at Harbor-UCLA, and do they differ from those seen in the UK?**

Type 2 Diabetes mellitus is one of the most common diseases in the developed world, with its associations with poor diet and obesity. This is especially marked in the US, which has the highest proportion of obesity in the developed world. The most common reason for being consulted was an ulcerated or gangrenous limb due to uncontrolled or unknown diabetes. This may have occurred more in the US than the UK due to the nature of the healthcare system- patients may have noticed problems earlier, but feared seeing a doctor because of the costs. Many patients who had been admitted for non-diabetic-related reasons also happened to be diabetic, and were referred to us accordingly to manage their blood sugars. In the US, Hispanic American patients appear to be more at risk for developing Type 2 diabetes, analogous to the increased risk in the South Asian population in the UK.

The endocrine department at Harbor-UCLA runs three main adult clinics; pituitary, thyroid and diabetes clinics (as well as general endocrine); these largely reflect the spectrum of pathology seen at Harbor-UCLA- notably similar to the UK. Hyperthyroidism secondary to Graves' disease is extremely common in both countries, and was a common case encountered in thyroid clinic.

A common cause of surgical requests for consult was also hypocalcaemia post-thyroidectomy, as it is in the UK. Clearly, the basic principles of human physiology and anatomy does not change across an ocean!

I saw the occasional rare case, such as a primary adrenal mineralocorticoid secreting adenoma (possibly Conn's syndrome), but these are equally rare in the UK as they are in the US.

In summary, the spectrum of endocrinological conditions at Harbor-UCLA is really very similar to that found in the UK. There are no specific endocrine conditions that are found at Harbor UCLA that would never be found in a British hospital, and prevalences are largely similar; this is unlike infectious diseases, for example, where TB is far more prevalent in East London than in South Los Angeles.

**How is healthcare organised and delivered (especially in terms of ease of access) for endocrinology in the US, in comparison with their counterparts in the UK, with its nationalised healthcare system?**

In order to understand how healthcare is organised and delivered with respect to endocrinology in the US, one must first understand how the health system works here.

Healthcare in the US is organised vastly differently from in the UK. In the UK every citizen and legal resident is entitled to healthcare, both with a regular GP/primary care doctor and a specialist if referral is necessary. In the US, healthcare is not considered a fundamental right, but must be earned. The most common method of obtaining health insurance (which will pay for healthcare if needed) is via one's employer (or a spouse/parent's employer), so a job is doubly important. The

employer provides health insurance- a policy that may only cover certain instances and not all scenarios, in which case the patient would have to pay out of pocket. Therefore, one must be careful to read a policy properly. Health insurance is also provided by the state to citizens of low-income (Medical) and those over 65 (Medicare) who qualify. Otherwise, if there is no insurance, then the patient must often pay out of pocket- bills for a lengthy hospital stay can run into the hundreds of thousands. In addition, to maintain health insurance a person may have to pay a monthly premium, commonly totalling tens of thousands of dollars per year. With this system, it is not surprising that the number one cause of personal bankruptcies in the USA is medical costs.

Harbor-UCLA is a Los Angeles County hospital; what this means is that it is essentially a safety-net hospital, where lower income people who have limited or no health insurance are able to gain access to treatment, as the county hospital accounts for the cost of medical treatment for the indigent through state funding.

When one considers the patient population at Harbor UCLA- a majority are lower socio-ecocomicHispanic, with Spanish as their primary language- it is easy to see how people might have difficulty accessing healthcare. Although legally in the US, many are unfamiliar with English, and despite being in the USA for over 20 years, have never held a job, and have remained in their isolated communities. Health insurance is therefore difficult to come by. Many doctors will only accept patients with the right kinds of health insurance, making access to healthcare even more difficult for these communities. As a result, many of the patients at Harbor UCLA had previously had no regular doctor, because of either language or insurance difficulties. This means that to get healthcare, they must present to the emergency department, or a county.

At Harbor-UCLA, Endocrinology functions in two main ways; an outpatient follow-up clinic, and an inpatient consult service. The outpatient service caters for people with known diabetes or thyroid/pituitary/adrenal pathology, but are able to be managed with medications in the community. This arrangement is exactly the same as the UK; however, there are some minor differences with the way inpatient endocrinology is arranged. The inpatient service is a consult service; if a patient presents with a problem , they are seen by Internal Medicine or General Surgery, who decides if there is a situation that requires an Endocrine consult, for example uncontrolled blood sugars, or a complex obvious endocrine problem such as a thyrotoxic storm. This is slightly different from the UK, where to see a specialist Endocrinologist, the patient must be referred by their primary care physician; "sideways" consults between specialties occur less frequently. This may be related to the billing system; specialists are only paid to deal with problems in their field, so to save time they may defer to endocrine, even with simple matters regarding blood sugar management. In the UK, it is not uncommon to see Endocrinologists dealing with lots of general medical patients (not just on-call, but on a regular basis). This is rare here in the US. Neither system is perfect- in the UK, the fact that a patient must commonly be referred back to his primary care doctor takes up time and paperwork.

In short, endocrinology is delivered in largely the same manner; the main difference is that it is more of a consult service than in the UK. The main differences lie in the way local people are able to access the healthcare.

**To gain further experience in both inpatient and outpatient endocrinology to complement previous experience at medical school, and to become more proficient at recognising endocrine disorders and treating them accordingly.**

My clerkship at Harbor-UCLA was immensely useful, in that I effectively functioned as an intern/junior resident, participating in patient care in a number of areas of endocrinology. This is something I had not really done before, as my final year medical rotation had been largely on a stroke ward.

In the outpatient setting (diabetes/thyroid clinic), I was able to see patients as part of their regular outpatient care. With diabetes, this involved analysing their current medication regimen, whether it be oral or insulin regimens, examining their blood sugar control and examining their feet for signs of peripheral neuropathy. I was able to then propose a management plan, typically titrating their medication upwards or downwards depending on their glycemic control, and making referrals to other multidisciplinary specialists such as dietitians and foot nurses. In thyroid clinic, I would examine their lab results and examine them, and judge whether a biopsy was required- typically nodular ones with echogenicity on previous ultrasound required one. Of course, my plans had to be approved by the attending physicians after presenting, but it was a very useful learning experience, finding out which areas I needed to improve on.

In the inpatient setting, I was able to form part of the consult service, along with the endocrinology fellow (equivalent to registrar). This was a great opportunity for me, as I was able to actively appraise a patient's clinical situation and recommend action for it- for example if a patient's blood sugars were uncontrolled, I would be able to prescribe the appropriate amount and type of insulin- supervised by the fellow.

I was assigned a number of patients, and it was my responsibility to check their labs, blood sugars, clinical status each day and present back to the attending physician along with my proposed plan of management. Although this had some pressure, the fellow was able to advise me, and the experience was an effective way of learning quickly how to manage common problems, such as raised blood glucose.

Certainly, this will have set me in good stead for making decisions with regards to managing common endocrinological complaints next year as a house officer.

**Since I have an Endocrinology F1 job next year, to become comfortable acting as a house officer in endocrinology. To become comfortable working with all aspects of the US system of healthcare, especially unfamiliar ones, should I choose to work there in the future.**

As detailed above, the experience at Harbor-UCLA was invaluable preparation for my Endocrinology house officer job next year. Not only was I able to see a range of pathology, I was able to see these patients first, and form a management plan for them, as well as receive constructive feedback on it.

I felt largely comfortable adjusting to the US system; three aspects stood out for me- language barrier, drug names, as well as the increased autonomy I was given in some cases- for example, for each patient that I saw in outpatients, I was expected to gain consent for any procedure done (in England this would be done by a more senior person)

With regards to working in the US, one thing that was notable, and a slight culture shock even though I knew to expect it, was the prevalence of Spanish-speaking patients. One is at a distinct disadvantage without proficiency in Spanish, as there are simply so many Hispanic Americans in the vicinity of Los Angeles and Southern California. This is particularly the case at Harbor-UCLA because of the low socio-economic status of the population, as mentioned before. If I ever come back, I will make sure to improve my Spanish in order to communicate effectively.

Regarding the unfamiliar drug names- initially it felt like I was doing Pharmacology again, but within a week I had come to recognise the most commonly used trade-names and their generic equivalents, for example Synthroid/Levothyroxine and Norvasc/Amlodipine, and was more comfortable with this aspect. In addition, units were often different- for example blood glucose monitoring was measured in mg/dL instead of mmol/L, leaving me clueless initially!

As a result, the experience at Harbor UCLA has taught me a lot about the US system, and has prepared me well should I want to practice inpatient medicine here.