SSC5c Elective Report

June 2013

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ENDOCRINOLOGY

Subject: Endocrinology

Location: St. Bartholomew's Hospital, London

Supervisor: Dr. Scott Akker

Dates: 6th May – 7th June 2013

Objectives

1. **What are the commonest endocrine conditions presenting at a tertiary endocrine centre compared with those seen on general medical wards in the UK?**
2. **How are specialist endocrine services structured in a tertiary centre compared with those in a district general hospital or general practice?**
3. **To follow complex endocrine patients through their treatment pathway, and personally assess patients with thyroid, adrenal, and pituitary disease, as well as endocrine cancer.**
4. **To improve focussed assessment of endocrine patients including history and examination, as well as the applicability of dynamic endocrine tests.**

I chose to carry out my elective at St Bartholomew's hospital with the specialist endocrinology team stemming from a keen interest in endocrinology that I had developed during my time at medical school. From day one of the elective it proved to be an invaluable learning experience. The team was very welcoming and encouraging, allowing me to get involved and truly feel a part of the team. Learning opportunities took the shape of clerking patients in outpatients clinic; both new and follow-up patients; subsequently presenting the clerkings to consultants, as well as clerking in new patients; including surgical

pre-admissions; on the ward. Through these experiences, I was able to explore my set objectives, as outlined below.

1. What are the commonest endocrine conditions presenting at a tertiary endocrine centre compared with those seen on general medical wards in the UK?

Via several thorough clerkings, my eyes were opened to the complexity of patients seen at the tertiary endocrinology centre, both with respect to symptomatology, and the sheer variety of pathology. Within my first week, I had seen a patient with a 'textbook' presentation of acromegaly, as well as patients with Cushing's disease, pituitary apoplexy, paraganglioma, and endocrine cancers largely encompassing neuroendocrine tumours and thyroid cancer. Having previously done an endocrinology attachment at a district general hospital (DGH), the contrast between the presentations seen was stark. In my nine weeks at the DGH, on the wards I only saw one case of thyrotoxicosis, and one patient with Addison's disease, with the bulk of the patient population being patients with diabetes mellitus and its associated complications, as well as several patients admitted under general/ acute medicine such as pneumonias, urinary tract infections, and acute pulmonary oedema. The majority of true 'endocrine' cases, in this setting, were seen in outpatients clinic, where I was able to clerk patients with hypo/hyperthyroidism, secondary amenorrhoea, pituitary dysfunction, and patients with suboptimal control of their diabetes. During several GP placements, the typical endocrine patient population, again mirrored that seen in the DGH outpatients clinic, with thyroid dysfunction and diabetes forming the majority. The care of multi-morbid obese patients was also commonly encountered in both the DGH and general practice, which was not at all surprising and quite fitting with increasing rates of obesity and its often associated metabolic syndrome and diabetes mellitus.

At the tertiary centre, the variety of patients encountered makes it difficult to say what the most commonly presenting endocrine conditions were, however, thyroid pathology was certainly one of the commonest, with several cases of thyroid cancer and thyrotoxicosis; the latter being managed both medically, surgically by virtue of hemi- or total thyroidectomies, and with radioiodine therapy. Pituitary disease was also commonly seen, patients presenting with pituitary apoplexy, non-functioning and functioning pituitary adenomas (with concomitant Cushing's disease, acromegaly, and hyperprolactinaemia), and post-neurosurgical hypopituitarism. What was common ground amongst all of these settings was that patients with endocrine disease frequently require long-term care and management, requiring a close working relationship between patients and clinicians, as well as between clinicians, and this point brings me nicely on to the structuring and delivery of specialist endocrine services at St Bartholomew's hospital.

2. How are specialist endocrine services structured in a tertiary centre compared with those in a district general hospital or general practice?

Services within the tertiary centre are well structured and organised, allowing streamlined patient care. The key to this is the multidisciplinary team (MDT) nature of the services encompassing specialist nurses, consultants and registrars from a variety of specialties including radiologists – vital in the reporting of an array of imaging studies ranging from CTs and MRIs of the head, pituitary gland, and body, to more specialised imaging such as metaiodobenzylguanidine (MIBG) and octreotide scans for phaeochromocytomas and neuroendocrine tumours; palliative care specialists – involved in the care of patients with refractory endocrine cancers; ear nose and throat-, endocrine-, and neuro-surgeons – taking on the surgical management of an array of endocrine pathologies ranging from thyroidectomies to trans-

sphenoidal hypophysectomies. The MDT would meet weekly during radiology meetings, as well as during ward rounds, thus allowing optimal patient care. The unit itself consists of two adjoining wards – Garrod ward with 10 inpatient beds; and Francis Fraser ward, led by specialist nurses; where patients attend for blood tests and dynamic endocrine investigations. Turnover of patients is reasonably high with respect to patients admitted for dynamic testing, then being discharged and followed up closely in clinic, whilst more complex endocrine cancer cases and multi-morbid patients tend to require longer periods of inpatient management. The department also makes use of specialised facilities for the safe administration and aftercare of radioiodine therapy. Pre-admissions and referrals from endocrine centres and GPs across the country often come in, requiring a more specialist assessment or a second opinion. Twice weekly endocrine clinics and a weekly radioiodine clinic allow for sufficient follow-up and review of patients. Services are run on a protocol basis, with several internal protocols for the investigation and management of endocrine pathology. An organised structure is vital to the smooth running of the endocrine services at St. Bartholomew's, whilst endocrine services delivered in a DGH or GP setting tend not to be so inherently structured and seem to fall within the general framework of the acute/ general medicine services and primary care trusts respectively.

3. To follow complex endocrine patients through their treatment pathway, and personally assess patients with thyroid, adrenal, and pituitary disease, as well as endocrine cancer.

During my time with the endocrine team, I was actively encouraged to clerk patients – both existing inpatients, as well as to carry out the initial clerking on new patient admissions. In doing so, I very easily met this objective and was able to assess patients with a diverse array of endocrine pathologies. This would be followed by presenting the patients to the registrars, and to the consultants on

the twice-weekly consultant led ward rounds, and subsequently reviewing patients blood tests, specialist endocrine tests such as cortisol day curves, dexamethasone suppression tests, insulin tolerance tests, etc., imaging, and discussing management plans. Each week I would typically clerk four or five patients, and would often end up presenting one of these patients during the weekly endocrine team meetings or bedside teaching sessions. Presenting patients at the meetings proved to be an invaluable learning process as it allowed me to review the patients from the start of their assessment through to their management plan and future follow-up, so allowing me to understand the care pathway and the logic behind it.

4. To improve focussed assessment of endocrine patients including history and examination, as well as the applicability of dynamic endocrine tests.

From day one with the endocrine team, I was able to really hone my history taking skills to tackle patients with complex pathologies, as well as to include more specific points in a detailed endocrine history. The way I was taught to do this was to think about each gland, the hormones it produces, and the symptoms that an excess or insufficiency would result in, and then to ask patients about these in a systematic approach. For example, when considering the pituitary gland, I would consider the effects of growth hormone (GH), prolactin, thyroid stimulating hormone (TSH), adrenocorticotrophic hormone (ACTH), luteinising hormone (LH), and follicle stimulating hormone (FSH), and then enquire about the resultant symptoms in a systematic head-to-toe approach. In order to put my learning into practice, I did this on every single patient I clerked, and also taught the third year medical students, on their endocrine attachment at the time, how to put this approach into practice. In clerking and following patients throughout their time on the ward, I became more familiar with the use of dynamic endocrine tests such as low dose dexamathasone suppression tests, short synacthen tests, oral glucose tolerance tests for growth hormone levels,

etc. I became familiar with the reasoning behind such tests and their interpretation. I was also able to gain a better understanding of more specialised invasive tests such as inferior petrosal sinus sampling and adrenal vein sampling, and their use in the diagnosis of Cushing's disease and Conn's syndrome respectively. I feel that I greatly improved my clinical examination skills during my time on this elective as I was taught excellent techniques for visual fields assessment, eliciting reflexes, fundoscopy, and thyroid examination, and was able to put these skills into effective practice as thorough clerkings of all patients were expected.

Overall I have really enjoyed my elective with the endocrinology team at St Bartholomews, the team are incredibly friendly and encouraging, the consultants are probably the nicest I have ever had the pleasure to train with and learn from, and I really feel that I have become a better clinician and am more interested to pursue a career in endocrinology.