ASSA/Sanofi Travelling Fellowship – Ilna Conradie

General Massachusetts Endocrine Surgery Unit

I am a surgeon in the Breast and Endocrine Unit at Tygerberg Academic Hospital. I visited the Endocrine Surgery Unit at General Massachusetts Hospital (MGH) in Boston for 4 weeks in September 2018.

The MGH Endocrine Unit consists of a multidisciplinary team of endocrine surgeons, endocrinologists, pathologists, radiologists, oncologists, specialized nursing staff and a wide range of support services. There is more than one endocrine surgery list per day with seven different endocrine surgeons working at either MGH or MEEI (Massachusetts Eye and Ear Infirmary) – the two hospitals joint, each with its unique set of skills and expertise.

During my time there, I joined 4 of the endocrine surgeons in theatre (Antonia Stephens, Gregory Randolph, Sareh Parangi and Richard Hodin) who all had a different approach and technique during surgery, as well as pre-operative localization or post-operative management of patients. I observed a variety of procedures including standard thyroid operations for benign and malignant disease, lymph node dissections, parathyroidectomies, with challenging neck reoperations and adrenalectomy.

I joined the clinics of a busy endocrine surgeon (Dr Antonia Stephen), an ENT thyroid/parathyroid specialist (Dr Gregory Randolph), endocrinologist (Dr Giuseppe Barbesino) as well as the thyroid clinic of Prof Gilbert Daniels (endocrinologist that served on the Board of Directors of the American Thyroid Association). I can highlight a case of locally advanced anaplastic carcinoma that is still disease free 5 years after resection, as well as a case of lingual thyroid with radiological features of papillary carcinoma needing further investigation that caused some debate.

I spent some time with radiologist Dr George Hunter reporting 4D CT scans for parathyroid localization, sharing his knowledge and experience and advising on how to implement this protocol in our hospital – which we have since done and gaining experience with its interpretation and application.

I spent a day in the pathology department with introduction by Dr Peter Sadow, joining the frozen section service in theatre as well as reviewing and reporting of routine thyroid and parathyroid cases.

I could identify a few differences in the general practice compared to our Endocrine Surgery Unit at Tygerberg Hospital. The standard of practice is same day discharge for thyroid and parathyroid surgery, with access to the medical system if any problems or complications develop. The patients should have access to transport as well as a friend or family member than can monitor them at home.

Energy devices are used liberally, no wound drains for thyroid lobectomy or total thyroidectomies, and most of the endocrine surgeons use intraoperative recurrent laryngeal nerve monitoring (IONM). This exposed me to the set-up of nerve monitoring, troubleshooting loss of signal, identification of the superior laryngeal nerve and the role of IONM in predicting post-operative nerve function.

Physician endocrinologists are much more involved in the management of thyroid cancer including diagnosis, treatment and surveillance. They also administer the radioactive iodine therapy (RAI). Saul Hertz (1905-1950) who discovered RAI as a diagnostic tool and as therapy in thyroid disease, administered RAI for the first time in 1941, at MGH.

I specifically enjoyed the different approaches and techniques used for ultrasound guided fine needle aspiration of thyroid nodules, performed by most endocrine surgeons as well as endocrinologists.

Seeing the clinical application of molecular tests on indeterminate thyroid nodules was of value to me - Thyroseq was used much more than Afirma, neither of these available in South Africa.

In the field of adrenal surgery, I observed an interesting approach to a large pheochromocytoma performed by Dr Richard Hodin: laparoscopic resection and assistance with a hand port to aid the dissection of a large right sided adrenal tumor.

In summary here are a few impressions that will stay with me:

- The value of patient education
- The responsibility of the patient – empowerment with knowledge – availability of pathology report and standardised follow-up protocols available to patients as well as primary care givers.
- Decentralising care with most patients being followed up by primary care givers
- The role of nurse practitioners in the specialised care centre, assisting with patient evaluation, supporting the specialist, enabling a more efficient system with higher patient turnover
- Phone call follow-ups, patient access to doctors via their electronic note system also allowing patients to contact their doctors for follow-up questions, all going on file
- Practical solutions for a busy clinic eg provisional reports to allow same day ultrasound and utilising support staff

I gained invaluable experience in endocrine surgery, but also knowledge about patient management systems, database development, research and innovations in the medical field.

The time spent at this unit also contributed to my eligibility for the European Board of Surgery Fellowship Exam in Endocrine Surgery, which I completed in May 2019.

Thank you to Drs Jenny Edge and Karin Baatjes for all their support and management of our busy unit while I was away. Most of all thank you to ASSA and Sanofi for giving me the opportunity to visit a high-volume centre with a specialised multidisciplinary team covering all aspects of endocrine pathology, it was a really a remarkable experience.