Name: Frederick Glyn
Candidate Number: 9210
Class of 2014

Neurosurgical Elective Report 2014 at Johns Hopkins Hospital

Objectives

- *To gain a broad appreciation of neurosurgery and its sub-specialties (Paediatric, Vascular, Tumour and Spinal Services).*
- *To attend neurosurgical clinics and be able to take a focussed history, perform neurological examinations, interpret blood and imaging results and present those back to senior colleagues.*
- *Learning how to manage neurosurgical patients.*
- *To perform basic peri-operative tasks.*
- *To perform basic suturing and understand neurosurgical procedures.*
- *Learning basic anatomy of spine column and cranium.*

I spent a month attached to the neurosurgical team at John Hopkins Hospital in Baltimore, Maryland. This elective has given me an excellent appreciation of the breadth and limits of neurosurgery as a specialty and the challenges that lie ahead.

Neurosurgery at John Hopkins is divided into 4 subspecialties; namely paediatric, vascular, tumour and spinal neurosurgery. I had the opportunity to experience all 4 subspecialties during my 4 week rotation; though it was I spent a larger proportion of my time on the neurosurgery service.

My typical weekday would involve:
-6am-6.30am: Rounds
6.30am-7am: Residents teaching conference.
-8.30 am-1pm: Clinic.
-2.30pm-7pm: Theatre.

Resident teaching was interesting for me, though perhaps it was beyond my level of training. I gained a descent appreciation of neuroradiology though during these meetings, though I found it difficult to appreciate their clinical significance. This was purely due to the specialist nature of the teaching that was being delivered to fellow neurosurgical residents.

Clinics were particularly useful. The first week involved shadowing my senior attendings in order to get a feel for the questions that needed to be asked and how the clinics were run. By my second week I was seeing patients by myself. I would usually start the consult by bringing up the patient's details on my computer screen to gain an idea for what the patient was in for and review any recent radiology imaging that they might have had. I would then take a detailed history and perform a focussed exam. Presenting the key findings to my attending was initially

challenging, but the more I presented, the more fluid I became. After my presentation, the attending would usually guide me through some of the imaging and teach me about the pathology in question. We would then see the patient together and I would observe the management plan.

Theatre sessions were perhaps the more enjoyable aspects of my neurosurgical placement. I was fortunate to see a very wide spectrum of neurosurgical pathology. I saw a huge variety of brain tumours, ranging from low grade and high-grade gliomas, schwannomas, meningiomas to renal metastases to the brain. Typically I would arrive in theatre half an hour early. I would observe and help prepare the patient with the team. This would include positioning the theatre lights, stereotactic screen and operation video camera in the correct place. Helping the theatre nurse insert the cannula and catheter was often appreciated and I was often the recipient of some excellent anaesthetic teaching. I have come to appreciate how important the positioning of the patient is in neurosurgery. Good positioning is the one of the key basis to successful neurosurgical intervention. The patient was usually positioned by the resident and theatre nursing staff. Much of it I was only able to observe, in order not the hinder the process. However, I was involved in some of the more basic maneuvers such as rolling the patient onto the operating table and positioning their arms. I would usually observe the resident create the sterile field. Due to the importance of keeping the field clean when operating on the brain, I would normally not be involved at this stage. However, I would scrub into the operation, giving me an excellent vantage point of the procedure. My very limited surgical skills limited me to holding the retractor, sucking excess blood and fluid from the operating field and irrigating while bone was being cut. However, I was fortunate enough to pluck dissected tumours off the patient on a few occasions. This experience has taught me the importance of being focused and aware of everything that was going on in the theatre; even if you're not doing anything and observing. This is easier said than done, especially during a five to six hour operation. The residents have been very kind to me in showing me how to close during operations. They showed me how to tie surgical knots and demonstrated to me clearly how create a clean, neat, tight seal for the wound. These skills will be especially important to me should I want to enter core surgical training in the UK. Post-operative care is critical part of the care process. After each operation, I was involved in taking the patient to the Post-Anaestheisa Care Unit and filling the appropriate forms needed to administer the controlled pain relief drugs prescribed by the resident. I would usually review the patients thereafter in the Neuro-intensive care unit/wards.

My weekends would involve shadowing the residents during on-call. Much of the time was spent waiting for consults in the residents office. However, it was interesting to see how residents managed complicated and often very sick patients. Knowing their limitations and when to call for senior help was a nation that was constantly stressed to me.

Neurosurgery is a small specialty dedicated often to rare diseases. As such, it isn't covered much at medical school. My knowledge of cranial and spinal pathology has a lot to be desired for, as I am now well aware. However, being aware of how little I know is the first step to gaining knowledge and being a safe doctor.

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I'm glad that I did this elective. I Have learned a lot about how to be a good doctor and what it mean to be a good doctor, from arguably some of the best surgeons in the world. It has also changed my preconceptions of the American healthcare system and I come back with a heightened appreciation of a British Healthcare system that is still largely free at the point of call and open to all citizens.