

## **ELECTIVE (SSC5c) REPORT (1200 words)**

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

I became interested in neurosurgery after completing my intercalated bachelors degree in neurosciences 3 years ago. However, I still was not sure if this was the right career for me. Neurology and plastic surgery were also possible options, especially plastic surgery for which I have organised a second part of my electives in. Ultimately, I decided not to do plastic surgery elective as I have enjoyed my time spent with neurosurgical department and thus carried on with the elective for additional 3 weeks.

My main aim for the elective was to get as much hands-on experience in surgery as possible. From my previous experience with Royal London Hospital, I expected it would be difficult to get involved with procedures and surgeries. It turned out, I was half right. The time I spent in the theatres was very valuable as I have learnt a lot about anatomy, different approaches and techniques as well as how to perform certain operations. In theory, I believe I could perform several different neurosurgeries on my own. However, most of my time in the theatres was spent observing elective surgeries. Perhaps, if I asked the surgeons more often whether I could scrub in, I would do so more often. The reason why I did not ask as to scrub in more often was because there were always 2, and sometimes 3, surgeons operating and I felt that I would have been in the way rather than helping. Nevertheless, it was very useful and educational experience for me.

However, I have managed to assist during emergency surgeries. These were mainly cranial surgeries, such as evacuation of chronic subdural haematomas and decompressive craniectomy, but also few spinal cord decompression. I've cut and close the skin, did several burr holes, assisted with craniectomy and craniotomies, prepare the surgical field, removed sutures, inserted ICP bolts and few other procedures. Eventhough this was definitely the best part of my electives, I still wish I did more.

One of my objectives was to find out how trauma services are operated in the area. Royal London Hospital is a major trauma centre for London, where many trauma cases get transferred to. Most of trauma patients have some degree of either head or spinal cord injuries, or both. If the patient has traumatic brain or spine injury, the on-call registrar is called to assess the patient. The patient is then taken to the CT scanner that is located next to the resus area and decision making process begins. It was very interesting to see how different cases were handled depending on the surgeon on-call. Most of the cases that I have seen in resus required stabilisation and observation, thus were transferred to ITU, with possibility of surgery later on. There was only once case that was taken straight to the theatres for decompressive craniectomy due to high ICP measurements. The first ICP bolt that I have ever done was for this patient. The time I have spent with an on-call team was invaluable.

Nevertheless, I was hoping to see more traumatic spinal cord injuries during my elective, however, I was only able to see one such case, which involved compression injury at C3-6 levels. Other spine cases that I have seen included vertebra fractures, prolapsed discs, spinal canal stenosis etc. My research interest is in the use of neuroprotective agents following spinal cord injuries hence I was very eager to find out how the above patient was going to be managed. What has surprised me was the decision made by the on-call registrar not to operate on this patient immediately. Interestingly, there is a growing body of evidence showing the beneficial effects of early surgical intervention leads to better outcome at a follow up. Although in some circumstances, early intervention may not be

possible, such as polytrauma patients that require more urgent, life-saving surgeries, but the above patient was not such case. Nevertheless, this case made me realise how complex the decision making process can be and that there is a scope for medical intervention for such patients, for example, with neuroprotective agents. Perhaps I will be able to utilize this limited experience in my research area.

During my elective I was involved with few different audits. My audit experience is limited to 2 audits I have done during my medical degree. However, in the past 8 weeks I got involved with 3 separate audits. One was looking into surgery cancellation rate, surgical conversion rate for patients with spondylolithesis, and ITU admission of patients with evidence of TBI on the CT scans. I especially enjoyed the audit on the surgeries cancellation rate as it made me realise how important it is to audit departmental performance on regular basis as it can show some important shortcomings. This audit gave 44% surgery cancellation rate, with 1 in 5 cases being cancelled on the day of the surgery, which most of the time was due to lack of available ward beds. The second audit that looked into surgical conversion rate for patients with isthmic spondylolithesis showed me the importance of good data keeping. Out of 143 notes requested, I have only received 67, out of which 32 were full set of notes. I have also identified other areas that would be useful to audit, such as how much money was wasted on re-ordering of cranioplasty plates due postponed surgeries. As a matter of fact, at the end of my elective period, the Trust that I was doing my electives in, was put into special measures due to, but no limited to, the high number of cancelled surgeries. I believe the single most important thing that this elective has taught me is the importance of clinical governance in delivering the best health care for patients.

Overall, my elective with neurosurgical team was good. I have been able to assist during surgeries, learn how to perform certain procedures, such as lumbar puncture, lumbar drain, inserting external ventricular drains and so on. I have also managed to populate my electronic logbook, which is going to be very useful when applying for the training number next year. What I enjoyed most about my electives were the emergency surgeries, where I was able to assist during surgeries, but also spending time with the neurosurgical team, which is made up of amazingly talented surgeons.