

SBNS Undergraduate Bursary Report of Neurosurgery Elective

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Why Royal Melbourne Hospital?

I chose to complete a 4-week neurosurgical elective at the Royal Melbourne Hospital (RMH), Australia, a leading academic institution for neurosurgery and the busiest neurosurgical centre in Australia. Having developed an interest in pursuing neurosurgery during medical school, I was keen to gain more experience of the specialty and explore subspecialties I hadn't had the opportunity to see before, such as neurovascular and functional neurosurgery. This was an outstanding opportunity to gain appreciation of healthcare in another country, and expand my knowledge of neurosurgery, particularly in an advanced academic department.

Objectives:

1. To observe management of patients with a range of neurosurgical conditions
2. To gain experience of an academic neurosurgical department
3. To observe new techniques e.g. intraoperative MRI
4. To gain further knowledge of neuroanatomy
5. To appreciate the healthcare system in Australia and compare this to the NHS

Timetable:

Monday: 6:30am ward round, 7:30am audit meeting, 9am - 5pm outpatient clinic, educational meeting 1pm

Tuesday: 6:30am ward round, 8am to 5pm theatre

Wednesday: 6:30am ward round, 7:30am - 8:30am teaching, 8:30am - 5pm theatre

Thursday: 6:30am ward round, 8am - 5pm theatre, brain tumour research meeting 12pm

Friday: 6:30am ward round, 8am - 5pm theatre, lunchtime consultant teaching to medical students and interns 1pm

Surgical exposure

I was extremely fortunate to be involved in 30 cases, including interhemispheric disconnection of a dural AV fistula, microvascular decompression, aneurysm and AVM clipping, ventriculoatrial shunt insertion and tumour resections. I was able to gain appreciation of management for different pathologies and patients, as well as witness every step of the surgical journey including the use of more advanced technology, such as intraoperative MRI, which was not available on previous attachments. It was fascinating to witness how this was used to increase the extent of safe resection and ultimately improve outcomes for the patient.

I had the opportunity to expand my knowledge of neurosurgical management and neuroanatomy through discussing cases, attending radiology and MDT meetings, teaching sessions and surgical exposure. From observing consultants to residents, I learned about prioritisation and key decision making, particularly around when to

operate or not operate, and the importance of good communication with patients and relatives around these decisions. I gained an appreciation for managing complications such as vasospasm after aneurysm coiling, and spinal dural tear resulting in CSF leak.

I was able to attend multiple subspecialty clinics run by consultants, fellows and registrars, and was able to observe neurovascular, skull base and a dedicated neurofibromatosis clinic. I followed patients on their journey from clinic, to theatre, to post-operative on the ward. It was a privilege to be involved in every step of the pathway.

Academic exposure

RMH is a very strong academic neurosurgical department, with multiple research programmes and clinical trials ongoing at the time of my placement. I was able to observe several surgeries in which clinical trials were taking place, showing the crucial importance of collaboration with research to further our understanding and ultimately effect better outcomes for patients. As an aspiring academic neurosurgeon, this experience of a truly research focused institution was incredibly motivating. It has inspired me to pursue more research opportunities to contribute to new knowledge and therapies for the future to improve patient outcomes.

Conclusion

Conducting my elective at RMH in neurosurgery was an outstanding experience. I not only enhanced my exposure to neurosurgery and reaffirmed my desire to pursue the specialty, but I also had the privilege to follow patients throughout their journey, and experience research in practice and how this can potentially improve patient outcomes. Regular teaching from expert neurosurgeons and questions from residents and consultants consolidated my learning and deepened my understanding of neuroanatomy, pathology and management. Shadowing residents and registrars gave me a realistic insight into the challenges faced in neurosurgical training, and the crucial skills required to develop during this time, such as prioritisation, clear decision making and communication.

It was a privilege to spend time with an exceptional team of interns, residents, fellows and consultants, as well as excellent nurses and allied health professionals on the ward and in clinic. I had an outstanding experience at RMH which I would recommend to anyone considering neurosurgery.

Acknowledgements

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