

SBNS Elective Report

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Conducting a month long sub-internship at The Johns Hopkins University, Baltimore, as part of my final-year elective rotations was as of yet, the most intensive, the most educational and enriching, as well as the most enjoyable experience of my medical education as of yet.

I spent a week each on the Brem, Walker, Cushing, Dandy, and Pediatric services, with a cumulative week adjacently spent at the Bayview Medical Center. The rigorous daily clinical routine involved early morning (~5am) rounds with junior residents immediately followed by rounds with the chief resident in the neurocritical care unit (NCCU). I drafted updates of patient lists post-rounds before doing so again in the evening, prepared OR lists for each day, supported residents with clinical tasks such as staple and suture removal, shunt taps, valve adjustments, drain removals, wound checks, and assist with patient transportation for neuroimaging. I conducted focused neurological examinations on patients to assess patient recovery and check for complications. This assisted the team in following up accordingly to verify my findings and update patient management plans. I was involved in communicating and following up with interdisciplinary teams including nurses, physical/occupational therapists and NCCU physicians to again further the management of patient. Drafting postoperative reports and resident notes in the EPIC system also gave me valuable insights into the administrative aspects of US healthcare. I had the privilege to spend time with an exceptional cohort of neurosurgical residents on service who all were exceptional surgeons and clinicians, but also incredible human beings who truly cared about their patients. I was also involved multiple on-call duties, including 24-hour shifts on weekends and night shifts. These on-call experiences were instrumental in honing my emergency care skills. Performing procedures such as external ventricular drain (EVD) insertion under supervision provided hands-on experience in critical care settings.

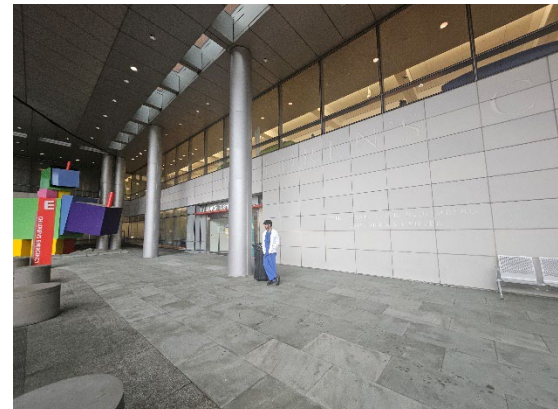
I was privileged enough to take part in 39 OR cases, scrubbing in to most of these cases. I was intensively immersed in the management of many different neurosurgical conditions with varying approaches being taken for each patient. I had the opportunity to assist in basic OR procedure from prepping and draping to registering neuronavigation systems such as Stealth and BrainLab. I became involved in cases from incision and exposure, drilling burr holes to using thermocoagulation devices, to suturing and knot tying for wound closure, and staying involved through postoperative care. It was a real-time, dynamic education in neuroanatomy, pathophysiology, surgical instrument usage and nomenclature, the finesse underlying every neurosurgical technique and the stamina and dexterity essential for any neurosurgeon. I was exposed to advanced neurosurgical technologies, including robotic surgery, use of the 3D exoscope and augmented reality for image guidance to name a few. This was a crash course in the some of the most innovative advancements in the neurosurgery and the improval in surgical outcomes technology inevitably brings. As per the nature of the diverse super-specialization within the institution, I was also fortunate enough to observe what would be otherwise rare

neurosurgical presentations, on a weekly basis from craniopharyngiomas to dural AV fistulas to moyamoya disease.

Conducting a five-week sub-internship in neurosurgery at The Johns Hopkins Hospital was one of the most transformative experiences of my medical education. During this elective, I had the privilege of rotating through various neurosurgical services and engaging in both clinical, operative and academic activities. This immersive experience not only enhanced my clinical and surgical skills but also served to further my own fascination with, and love for, the field of neurosurgery and the unlimited potential within which future research will truly change the world. Regular questioning on pathophysiology, neuroanatomy, surgical instruments, and the management of neurosurgical conditions was a challenging yet invaluable part of my learning experience. This rigorous questioning by residents and attendings helped solidify my understanding through application in real-world clinical scenarios.

Attending weekly Grand Rounds, Cushing Rounds neurovascular, skull base, spine and tumor board conferences, as well as participating in Journal Club and Pathology Case Conferences significantly broadened my knowledge of current advancements and challenges in neurosurgery. I was privileged to spend a day at the Hunterian lab led by Dr. Brem and Dr. Tyler, with their post-doctorate research fellow. Observing research methodologies and the application of laboratory techniques in mice models displayed to me the confluence of laboratory animal research and research expertise within the field of brain tumors. I observed the critical role of pre-clinical research in advancing the medical field.

I would like to extend my deepest gratitude to the Society of British Neurological Surgeons for awarding me their undergraduate bursary for my elective placement.



Pictures at the Sheikh Zayed Tower (top left), with a few of the neurosurgery residents (top, top right), in front of The Johns Hospital Main Entrance (bottom left, in front of the Billings Building entrance (bottom) and in front of the Charlotte R. Bloomberg Children's Center (bottom right).