

## Pediatric Neurosurgery Elective Rotation

### Introduction

Pediatric Neurosurgery addresses the surgical needs of patients born with a wide array of neurosurgical disorders. Many of these are congenital in nature, and as such, no two are alike. It is very important to gain a solid background on the basic surgical principles needed to treat these conditions. The elective rotation at UHS, serves to further augment the experience obtained at CSRCH. Endoscopy, craniosynostosis, tumors and spinal trauma/lesions are areas that the resident can gain further exposure and knowledge.

### Goals

The goals of this elective rotation are to expose the resident to the fundamental skills in the diagnosis and treatment of several conditions which include:

- A. Endoscopic management of craniosynostosis
- B. Endoscopic management of intraventricular pathology
- C. Management of cranial trauma
- D. Management of spinal trauma
- E. Management of pediatric oncology: cranial and spinal
- F. Management of hydrocephalus
- G. Management of congenital spina bifida
- H. Management of encephaloceles
- I. Management of Chiari formations

### Resident Responsibilities

1. Manage the entire pediatric neurosurgical service at UHS: PICU, NICU, PTU
2. Attend Wednesday afternoon pediatric clinic at UHS
3. Scrub in on all pediatric cases at UHS
4. Evaluate new inpatient consultations in the pediatric units
5. Evaluate new emergency room consultations

### Scholarly Responsibilities

1. Reading assignments – resident to complete reading assignments on a weekly basis and discuss with attending on Tuesdays.

Pediatric Neurology – Principles and Practice, Kenneth Swaiman, Volume 1

Chapter 1. General aspects of the neurologic exam

Chapter 2. Neurologic examination of the older child

Chapter 3. Neurologic examination after the newborn period until 2 years of age

Chapter 4. Neurologic examination of the term infant

Chapter 5. Neurologic examination of the preterm infant

The Pediatric Spine – Principles and Practice – Stuart Weinstein

Chapter 1. Development and maturation of the axial/skeleton

Chapter 11. Craniovertebral junction abnormalities

Chapter 13. Neurosurgical management of spinal dysraphism

Chapter 15. Developmental abnormalities of the cervical spine

Appendix B. Embryology, Growth and Maturation

Appendix C. Radiographic measurements

Pediatric Neuroimaging 3<sup>rd</sup> Ed – James Barkovich  
Chapter 4. Brain and Spine injuries in infancy and childhood  
Chapter 5. Congenital Malformation of brain and skull  
Chapter 7. Intracranial, orbital and neck tumors of childhood  
Chapter 8. Congenital anomalies of the spine  
Chapter 9. Neoplasms of the spine  
Chapter 10. Infections of the nervous system

2. Manuscript Writing

It is expected that the resident will work with the attending in the planning, preparation and writing a manuscript for submission by the end of the rotation.

Schedule

Monday – Thursday: AM Clinical Rounds with briefing of chief resident and attending

Tuesday PM: Academic Day

Wednesday PM: Pediatric Neurosurgery Clinic

Thursday AM and PM: Surgical Cases at UHS OR

Friday: Conferences

Contact Information

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