

Neuroanesthesia Panel

Part III: Post-operative Care

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Disclosures: I have no conflicts of interest to disclose.

Learning Objectives:

1. Review the immediate post-operative concerns for patients undergoing intracranial vascular surgery
2. Understand the diagnosis and management of cerebral hyperperfusion syndrome
3. Understand the diagnosis and management of post-operative cerebral ischemia
4. Review indications and evidence for cerebral monitoring modalities
5. Discuss the potential for neuroprotective management strategies

Outline

1. Immediate Post-operative Concerns
 - a. Blood pressure management
 - i. Optimal BP targets
 - ii. Choosing antihypertensive agents and pressors
 - b. Neurologic Examination
 - i. Focused neurologic examination for the anesthesiologist/intensivist
 - ii. Some basic neuroanatomy will help you localize
 - c. Symptom management that maintains perfusion goals and optimizes CMRO₂
 - i. Pain
 - ii. Coughing
 - iii. Shivering
 - iv. Temperature
 - d. Bigger problems
 - i. Cerebral hyperperfusion syndrome
 - ii. Cerebral ischemia
 - iii. Hemorrhage
 - iv. Seizure
2. Cerebral monitoring modalities and their indications
 - a. ICP monitoring
 - b. Jugular Bulb Catheterization
 - c. Brain oxygen tension monitoring (PBtO₂)
 - d. Near infrared spectroscopy
 - e. Cerebral Microdialysis
3. A 10 minute crash course in managing the injured brain
 - a. ICP
 - b. CVP and fluid management
 - c. PEEP and FIO₂
 - d. Anemia
 - e. Glucose management
4. Neuroprotection: an elusive goal