

4-month-old male infant with enlarging head circumference for craniotomy

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Objectives:

Following this PBLD session, participants should be able to:

1. Identify the various etiologies of hydrocephalus.
2. Recognize the signs and symptoms of hydrocephalus.
3. Explain the anesthetic management and goals for intracranial hypertension, to optimize cerebral perfusion pressure.
4. Understand the preoperative evaluation and preparation of an infant for craniotomy.
5. Identify the perioperative concerns associated with anesthetizing this infant.
6. Formulate an anesthetic plan to manage an infant with an intracranial mass, scheduled for craniotomy.

Stem Case:

A 4-month-old infant with a three-week history of nystagmus, an abnormal enlarging head circumference, and worsening irritability is scheduled for craniotomy. MRI revealed a large suprasellar mass with cyst and hydrocephalus.

The patient was born at full-term, twin B, via C-section secondary to transverse lie. Uneventful birth history and hospital stay. Patient was discharged home on the fifth day of life.

Weight 5.8 kg; head circumference 45.5 cm; hemoglobin 13.7 g/dL; hematocrit 37.8%.

Questions:

What are several causes of hydrocephalus?

What are the presenting signs of intracranial hypertension in an infant, and how will you treat it?

What other information do you need in order to formulate a plan?

Will you pre-medicate this infant?

What monitors will you use during the craniotomy?

Discuss your anesthetic plan.

What are the postoperative anesthetic concerns in this infant?

References:

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