

Anesthetic Management of a Parturient with Colloid Cyst: Considerations for Labor Analgesia and Surgical Anesthesia

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Learning Objective

Identify key anesthetic considerations in managing labor analgesia and surgical anesthesia in parturients with intracranial colloid cyst, including the risks associated with neuraxial techniques.

Background

Colloid cysts, although often asymptomatic, can lead to obstructive hydrocephalus and increased intracranial pressure (ICP), especially when CSF dynamics are altered. Neuraxial techniques such as spinal or epidural anesthesia may further alter CSF flow dynamics or ICP pressure gradients, potentially leading to acute neurological deterioration. Published reports describing anesthetic management of parturients with colloid cysts are exceptionally limited, which highlights the absence of established guidelines as well as the need for individualized and multi-disciplinary case planning.

Case Description

A G1P0 parturient presented at term with a history of a 7 mm colloid cyst located at the level of the foramen of Monro and mildly enlarged left lateral ventricle noted on brain MRI. She was neurologically intact without any definitive signs of increased intracranial pressure. The anesthesia team was consulted to evaluate for potential epidural placement for analgesia during labor.

A literature review revealed two cases of sudden death in patients with colloid cysts following diagnostic lumbar puncture and only one report of successful epidural placement in a patient with colloid cyst. After multi-disciplinary discussion, the team opted against neuraxial anesthesia. Remifentanyl PCA was recommended as an alternative. Despite this, the patient experienced significant breakthrough pain and ultimately underwent cesarean delivery under general anesthesia. Intraoperatively, the patient received a multimodal pain regimen consisting of intravenous medications and bilateral transverse abdominus plane (TAP) peripheral nerve blocks.

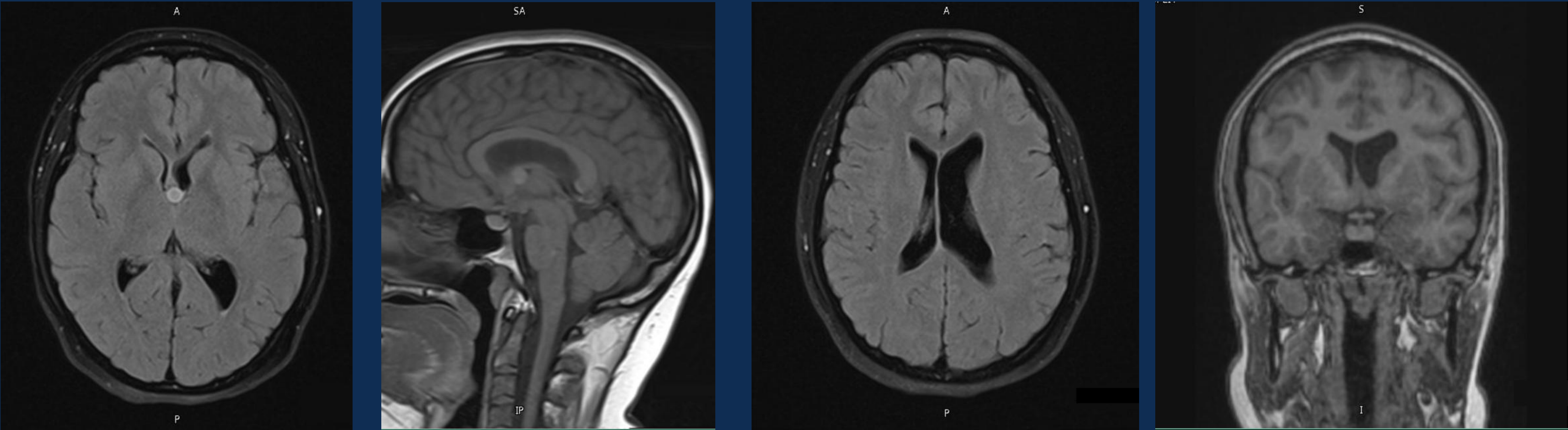
The patient tolerated both surgery and general anesthesia well without any evidence of increased ICP or neurological changes. Postoperatively, her pain was effectively controlled with non-opioid medications.

Discussion

The anesthetic management of parturients with colloid cysts necessitates careful consideration of intracranial pressure dynamics, maternal-fetal safety, and timing of delivery. Neuraxial techniques, though standard in obstetric anesthesia, may create harmful shifts in CSF pressure in patients with obstructive lesions.

Analgesic options during labor are limited by placental transfer and the potential for neonatal respiratory or central nervous system depression, whereas multimodal pain strategies become feasible once delivery is complete.

General anesthesia was selected in this case to avoid abrupt changes in CSF pressure. Although it may transiently increase ICP, these effects are typically mild and reversible compared to the potentially catastrophic consequences of neuraxial decompression. Successful outcomes in such cases depend on individualized planning and multi-disciplinary care.



*All clinical descriptions and MRI images have been de-identified to exclude any protected health information in accordance with HIPAA standards.

References

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