Cerebral vasospasm after open fenestration of an arachnoid cyst in a 4-year-old boy

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INTRODUCTION

• Cerebral vasospasm (CVS) can be considered if a new neurologic deficit develops s/p arachnoid cyst fenestration.
• More studies are needed to assess safety and comparative efficacy of a pediatric vasospasm treatment protocol.

CASE REPORT

A previously healthy 4-year-old boy presented with gait abnormalities in the setting of a large supratentorial arachnoid cyst with 8 mm midline shift.

• Left pterional craniotomy and endoscopic cyst fenestration were performed without complication.
• On POD7, he presented with vomiting and headache and was treated for suspected chemical meningitis. He remained at his full neurologic baseline.
• On POD12, he developed L hemiparesis. MRI revealed acute ischemia in the R MCA territory. Cerebral angiography revealed diffuse vasospasm.
• He was treated with intra-arterial verapamil, oral nimodipine, and hemodynamic augmentation.
• His motor exam improved in two days.
• At discharge two weeks later he was back to his full neurologic baseline.
• Six months later, he remains without neurological deficit.
• Possible vasospasm triggers in this case include chemical meningitis, ICP changes, and trace sub-arachnoid blood or blood products.

CONCLUSION

• CVS can be considered if a new neurologic deficit develops s/p arachnoid cyst fenestration.
• More studies are needed to assess safety and comparative efficacy of a pediatric vasospasm treatment protocol.