

Space-Occupying Cerebellar Infarction (SOCI): Intraoperative Visualization of Raised Intracranial Pressure and Cerebellar Tissue Prolapse

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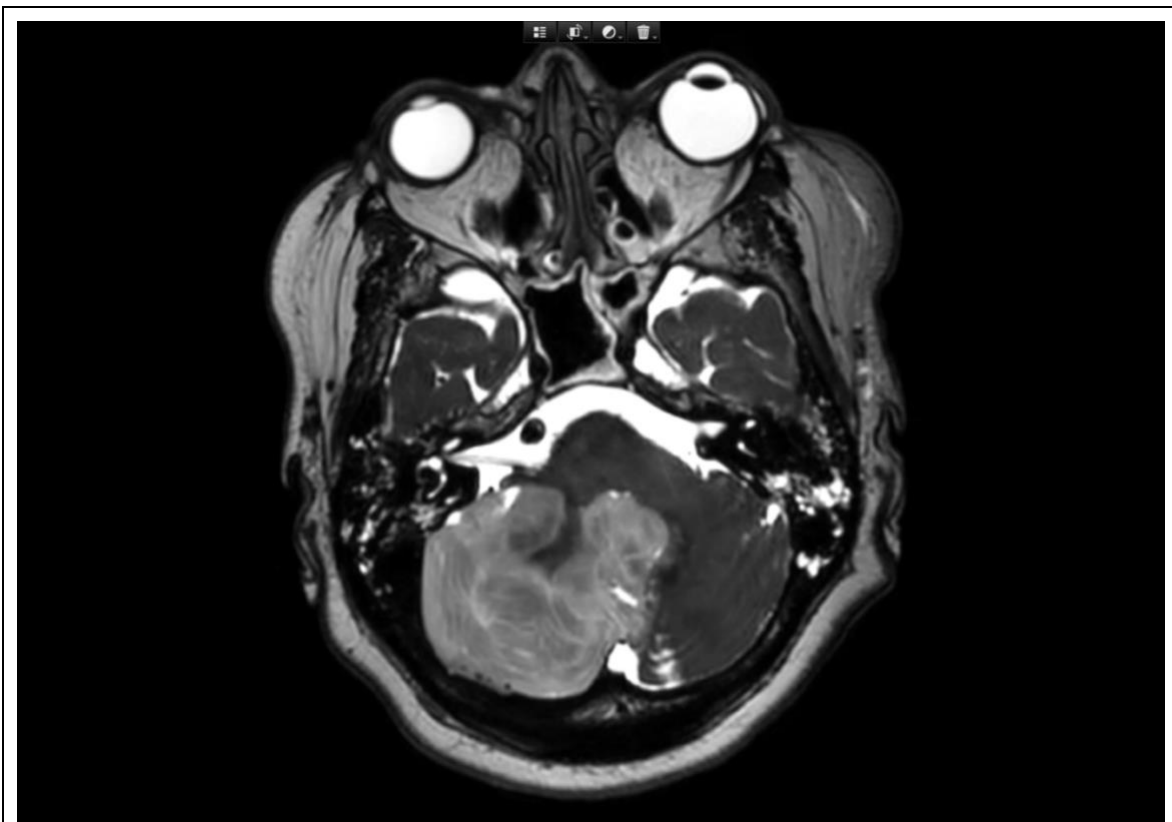


Figure 1: Axial MRI of the posterior fossa demonstrating a right-sided space-occupying infarction in the posterior inferior cerebellar artery (PICA) territory.



Figure 2: Axial CT scan of the posterior fossa demonstrating partial right-sided resection of infarcted cerebellar tissue and distinct cavity with partial hemorrhagic transformation of residual infarcted tissue areal.

Case Description

A 60-year-old woman underwent emergency replacement of the ascending aorta and aortic hemiarch with a supracoronary tube graft for acute type A intramural hematoma. The postoperative course was critical and complicated by neurological deterioration. Initial brain CT demonstrated a right PICA territory infarction. Progressive neurological worsening culminating in a comatose state prompted additional MRI, which revealed progression of the space-occupying cerebellar infarction (Figure 1).

To alleviate increased pressure within the posterior fossa, a navigated mini-osteoplastic suboccipital craniotomy with partial resection of infarcted cerebellar tissue was performed. Upon dural opening, immediate prolapse of infarcted cerebellar tissue confirmed increased intracranial pressure (Video 1).

Following neurosurgical intervention, the patient showed rapid neurological improvement. Within five days, she regained the ability to communicate and demonstrated full movement of all extremities. Follow-up CT imaging confirmed adequate posterior fossa decompression, a distinct resection cavity, and relief of brainstem compression (Figure 2).

Clinical Video

Video showing the intraoperative view of a small (2 × 2 cm) right-sided posterior fossa craniotomy with the dura initially closed. Upon opening the dura, immediate cerebellar tissue prolapse is observed due to increased intracranial pressure.

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