

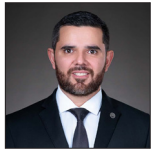
Video Abstract

Retrosigmoid approach for the resection of a large choroid plexus papilloma: Three-dimensional operative video

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ABSTRACT

Background: Choroid plexus papillomas of the infratentorial compartment are rare, benign tumors, commonly arising from the inferior roof of the fourth ventricle, with frequent extension into the foramina of Magendie and Luschka and toward the cerebellopontine cistern. Clinical presentation often reflects intracranial hypertension due to cerebrospinal fluid obstruction and, occasionally, hypersecretion. Neurological deficits may include cranial nerve palsies, cerebellar signs, and altered mental status secondary to brainstem and cerebellar compression. Gross total resection remains the treatment of choice to maximize oncological control and preserve neurological function. Surgical approach selection depends on tumor size, extent, and proximity to critical neurovascular structures. While the retrosigmoid approach is traditionally performed in the lateral position, a semi-sitting position may enhance visualization and maneuverability for lesions extending into the cerebellopontine and cerebellomedullary cisterns.

Case Description: We present a 16-year old with a 1-year history of progressive headache and right hemiparesis due to a large choroid plexus papilloma involving the posterior fossa cisterns. Microsurgical resection was achieved through a retrosigmoid craniotomy in the semi-sitting position following detailed preoperative planning.

Conclusion: The semi-sitting retrosigmoid approach offers direct access to the cerebellopontine and cerebellomedullary angles, enabling precise dissection of critical neurovascular structures in a clear surgical field. This operative video illustrates key anatomical and technical considerations, supporting the approach as a safe and effective strategy for complete tumor resection and favorable long-term outcomes. The patient provided informed consent for the procedure and publication.

Keywords: 3D operative video, Choroid plexus papilloma, Retrosigmoid approach, Semi-sitting position, Skull-base surgery

[Video 1]-Available on:

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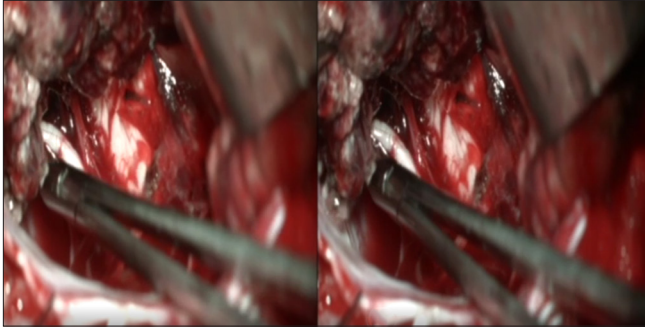
Annotations

00:26 – Clinical presentation

00:26 – MRI findings compatible with choroid plexus papilloma^[1,3,5]

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Video 1: Case presentation and microsurgical video in double image to enable 3D visualization. (Alternative link to watch surgical video in better quality: <https://www.dropbox.com/scl/fi/ksp1u6fwkrkwvcsq5kwga/mediumres-Video-Retrosig-Choroid-Plexus-Papilloma-modified-rev.mov?rlkey=p7ftsvz0ylfie3yrktvrm59l0&st=h88095rl&dl=0>).

00:38 – Tumor size, extension, classification, vascular supply, and rationale for treatment and surgical approach decision^[1,2,4,6,7]

01:17 – Surgical goal for choroid plexus papilloma with a retrosigmoid approach^[6,8]

01:25 – Benefits and risks of semi-sitting position^[8]

01:46 – Intraoperative adjuncts and key surgical steps^[1,5,7,8]

01:55 – Setup (positioning, skin incision planning)

02:30 – Microsurgical video

06:04 – Hemostasis and preserved cranial nerve structures corroboration

06:32 – Outcome

Ethical approval: The Institutional Review Board approval is not required.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest: There are no conflicts of interest.

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