

# Fourth ventricle arachnoid cyst

**Fourth ventricle arachnoid cyst** and juxta fourth ventricular arachnoid cysts (ACs) are rare clinical entities. Conventionally, ACs are managed with either micro-surgical excision or cerebrospinal fluid (CSF) diversionary procedures such as a shunt. Effective treatment modality still remains controversial. Advances in neuroendoscopy have helped in the effective management of this benign condition in a minimally invasive method. Description of a subset of patients with fourth ventricular and juxta fourth ventricular ACs and hydrocephalus who underwent transaqueductal cysto-ventriculostomy with a flexible neuroendoscope was the objective of this study. **Methods** This study included the data of patients with fourth ventricular and juxta fourth ventricular ACs and hydrocephalus operated between 2008 and 2019. Of 350 intraventricular neuroendoscopic procedures done during the last 11 years, 8 had obstructive hydrocephalus due to fourth ventricular and juxta ventricular arachnoid cyst. Endoscopic transaqueductal cystoventriculostomy and transaqueductal shunt placement was done in all using a flexible neuro-endoscope. **Results** Patients were aged 20 days to 15 months; in the neonate, the diagnosis was established during routine antenatal screening. Surgical procedure was done using a flexible neuro-endoscope. All improved symptomatically, radiologically and are on regular follow-up to date. One patient had postoperative meningitis, which gradually improved with antimicrobial therapy. None required alternative form of treatment such as shunt or craniotomy and microsurgical excision. **Conclusion** Endoscopic transaqueductal cysto-ventriculostomy is a safe, effective and minimal invasive modality in the hands of an experienced neurosurgeon for the management of fourth ventricular and juxta ventricular arachnoid cysts <sup>1)</sup>.

<sup>1)</sup>

Raju S, Shighakolli R, Lingappa L. Endoscopic Trans-Aqueductal Procedures for Juxta 4th Ventricular and Posterior Fossa Arachnoid Cyst using Flexible/Video Neuroendoscope: A Novel Approach. Asian J Neurosurg. 2023 Mar 27;18(1):62-69. doi: 10.1055/s-0043-1760858. PMID: 37056875; PMCID: PMC10089760.

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