

Obstructive Hydrocephalus Etiology

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Obstructive hydrocephalus typically is caused by a blockage in the normal circulation of CSF within the brain. This can be due to the scarring of a ventricle or a tumor. When the obstruction is due to a tumor, it is important to realize that the tumor has only a 10% chance for growth and the only treatment required is for the hydrocephalus.

In children with [congenital malformations](#) that do not allow CSF to flow properly, or In adults or children, when tumors or blood clots obstruct CSF circulation, or

As a result of [injury](#) or [infection](#).

A study confirms the trend of the predominance of congenital causes of hydrocephalus in [Africa](#), even if maternal infections can be involved in the development of some of them. The morbimortality of this pathology remains important, especially concerning neurocognitive outcomes ¹⁾

Examples: [Pineal germinoma](#).

[Obstructive hydrocephalus](#) secondary to enlarged [Virchow Robin space](#) (VRS) is a rare entity, with only a handful of cases reported in the literature. Presenting symptoms varies widely from headaches, through to dizziness.

Donaldson et al. report a 31 year old male who presents with [pulsatile tinnitus](#) and an MRI showing obstructive hydrocephalus secondary to tumefactive VRS. After a CSF diversion procedure in the form of an ETV he had almost complete resolution of his symptoms.

This is the first case of obstructive hydrocephalus secondary to enlarged Virchow-Robin spaces, presenting with pulsatile tinnitus ²⁾.

Obstructive hydrocephalus from enlarged [massa intermedia](#) ³⁾.

Obstructive hydrocephalus from posterior fossa tumors

[Obstructive hydrocephalus from posterior fossa tumor.](#)

Obstructive hydrocephalus from intracranial colloid cyst

[Obstructive hydrocephalus from intracranial colloid cyst.](#)

Obstructive hydrocephalus from intracranial arachnoid cyst

Large [intracranial arachnoid cysts](#) in locations compressing CSF [pathways](#) causing [hydrocephalus](#) are also candidates for surgical fenestration ⁴⁾.

Obstructive hydrocephalus from central neurocytoma

[Obstructive hydrocephalus from central neurocytoma.](#)

¹⁾

Kpélao E, Ahanogbé KMH, Egu K, Doléagbénou AK, Moumouni AEK, Sossoukpe S, Ségbédji KK, Bakondé HE, Lawson D, Abaltou B, Abdoulaye HM, Békéti KA. Children hydrocephalus in Togo: etiologies, treatment, and outcomes. Surg Neurol Int. 2022 Dec 2;13:560. doi: 10.25259/SNI_927_2022. PMID: 36600766; PMCID: PMC9805628.

²⁾

Donaldson C, Chatha G, Chandra RV, Goldschlager T. Obstructive hydrocephalus secondary to enlarged Virchow-Robin spaces: A rare cause of pulsatile tinnitus. World Neurosurg. 2017 Mar 4. pii: S1878-8750(17)30292-9. doi: 10.1016/j.wneu.2017.02.119. [Epub ahead of print] PubMed PMID: 28268131.

³⁾

Vastani A, Al-Faiadh W, O Chieng D, Siddiqui A, Bleil C, Singh R, Zebian B. Obstructive hydrocephalus due to an enlarged massa intermedia treated with endoscopic third ventriculostomy. Br J Neurosurg. 2023 Jan 16;1-4. doi: 10.1080/02688697.2022.2159924. Epub ahead of print. PMID: 36647190.

⁴⁾

Beltagy MAE, Enayet AER. Surgical indications in pediatric arachnoid cysts. Childs Nerv Syst. 2022 Oct 26. doi: 10.1007/s00381-022-05709-y. Epub ahead of print. PMID: 36284010.

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