

Dandy-Walker malformation treatment

Treatment is generally focused on alleviating hydrocephalus and posterior fossa symptoms, often including surgical interventions like ventriculoperitoneal and [cystoperitoneal shunting](#)¹⁾.

Early treatment for [ventriculomegaly](#) is recommended to achieve maximum cognitive development. In the absence of [hydrocephalus](#), DWM may be followed. When treatment is necessary, the [posterior fossa cyst](#) must be shunted. Shunting the lateral ventricles alone is contraindicated because of the risk of upward herniation²⁾

However, it is important to confirm the patency of the cerebral aqueduct, otherwise, the supratentorial [ventricles](#) need to be shunted concurrently. Varying reports exist regarding rates of associated [aqueductal stenosis](#), although it is widely believed to be rare.

Another option once used commonly is excision of the obstructing membrane. This has fallen out of favor due to its associated risks of morbidity and mortality. However, it remains an option for patients with frequent shunt malfunctions

Newer treatments include [endoscopic third ventriculostomy](#) in cases where the aqueduct is patent; however, further study is necessary^{3) 4)}.

In a North American, multicenter, prospective database review, shunt-based and ETV-based primary treatment strategies of DWSH appear similarly durable. Pediatric neurosurgeons can reasonably consider ETV-based initial treatment given the similar durability and the low complication rate. However, given the observational nature of this study, the treating surgeon might need to consider subgroups that were too small for a separate analysis. Very young children with comorbidities were more commonly treated with shunts, and older children with fewer comorbidities were offered ETV-based treatment. Future studies may determine preoperative characteristics associated with ETV treatment success in this population⁵⁾.

Ascending transaqueductal cystoventriculoperitoneal shunt

[Ascending transaqueductal cystoventriculoperitoneal shunt](#)

1)

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2)

Mohanty A, Biswas A, Satish S, et al. Treatment options for Dandy-Walker malformation. J Neurosurg. 2006; 105:348-356

3)

Garg A, Suri A, Chandra PS, et al. Endoscopic third ventriculostomy: 5 years' experience at the All India Institute of Medical Sciences. Pediatr Neurosurg. 2009; 45:1-5

4)

Sikorski CW, Curry DJ. Endoscopic, single-catheter treatment of Dandy-Walker syndrome hydrocephalus: technical case report and review of treatment options. Pediatr Neurosurg. 2005; 41:264-268

5)

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