

OTITIC HYDROCEPHALUS

INDICATIONS AND PATIENT SELECTION

Otitic hydrocephalus is believed to occur as a result of lateral sinus thrombosis. It is a rare complication characterized by papilledema and ipsilateral abducens palsy in the majority of cases; the exact mechanism is not known and it can occur even if the contralateral lateral sinus is patent.^[45] One series in India reported three cases of tubercular origin.^[46] Previously it was believed that the pathophysiology must also involve the superior sagittal sinus, but this theory is debatable.^[47]

Patients typically have signs of increased intracranial pressure, such as nausea, vomiting, and diplopia. Lumbar puncture may show opening pressures as high as 480 mm H₂O^[48] with otherwise normal CSF findings and hence must be performed with great care (e.g., in the operating room with a compliant patient in the lateral decubitus position) if brain stem tonsillar herniation is a concern based on findings of papilledema. MRI and MR venography show transverse sinus thrombosis well.^[49] Importantly, one series of five pediatric patients from Germany over a 4-year period found that all but one had already achieved resolution of acute otitis media with antibiotic treatment 1 to 4 weeks previously but were found to have diplopia.^[50]

SURGICAL TECHNIQUE

In the recent German series,^[50] all five patients improved only with surgical intervention; intravenous antibiotics alone were not sufficient treatment. Surgery included mastoidectomy, myringotomy, and in some cases a lumbar drain. If lateral sinus thrombosis is present, it may be aspirated by needle, with possible incision and drainage. Elevated intracranial pressure should be treated medically with mannitol, acetazolamide, or other diuretics.

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