Ventriculo sagittal sinus shunt

Fifty-two children with hydrocephalus had ventriculo-superior sagittal sinus shunts installed. Communicating hydrocephalus in 18 patients and noncommunicating in 34. Eleven patients died in the immediate postoperative period: 2 from intraventricular hemorrhage; 7 from midline tumors, who were moribund on admission; and 2 from postoperative infection. Forty-one patients recovered from the operation, but the 17 who had tumors eventually died from their disease. Of the 24 surviving patients, 7 were lost to follow-up. The remaining 17 patients were followed for one to six years (average, 4 years, 9 months). Of the 24 patients, 9 (37.5%) needed revision of the tube because of blockage, 6 in the intraventricular end and 3 in the sinus end ¹⁾.

A case report highlights causes of failure of the ventriculo-sagittal sinus (V-S) shunt and precautions to avoid them.

Elwatidy present a 14-year-old girl, with posthemorrhagic hydrocephalus with multiple revisions of ventriculo-peritoneal (V-P) and ventriculo-atrial (V-A) shunts. She developed malfunctioned V-S shunt, and ventriculitis that was complicated with massive cerebellar infarction and brainstem stroke and the patient died. To avoid shunt dysfunction, a cardiac catheter with side slits should be used, magnetic resonance angiography is recommended before shunt placement to check the patency of the sinus, and the pressure in the superior sagittal sinus should be measured at the time of surgery. In patients with problematic distal catheters, direct placement of the catheter into the right atrium using thoracoscope could be an alternative to gall bladder or ureter shunts²⁾.

1)

Wen HL. Ventriculo-superior sagittal sinus shunt for hydrocephalus. Surg Neurol. 1982 Jun;17(6):432-4. PubMed PMID: 7112374.

Elwatidy SM. Ventriculo-sagittal sinus shunt malfunction. Causes of failure, avoidance, and alternatives. Neurosciences (Riyadh). 2009 Apr;14(2):172-4. PubMed PMID: 21048605.

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