
Use of the proGAV shunt valve in normal-pressure hydrocephalus

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Abstract:
BACKGROUND: Overdrainage is a common complication associated with shunt insertion in normal-pressure hydrocephalus (NPH) patients. Using adjustable valves with antigravity devices has been shown to reduce its incidence. The optimal starting setting of an adjustable shunt valve in NPH is debatable. OBJECTIVE: To audit our single-center practice of setting adjustable valves. METHODS: We performed a retrospective review of clinical records of all NPH patients treated in our unit between 2006 and 2009 by the insertion of shunts with a proGAV valve, recording demographic and clinical data, shunt complications, and revision rates. Radiological reports of postoperative follow-up computed tomography scans of the brain were reviewed for detected subdural hematomas. RESULTS: A proGAV adjustable valve was inserted in 50 probable NPH patients between July 2006 and November 2009. Mean +/- SD age was 76 +/- 7 years. Mean follow-up was 15 months. The initial shunt setting was 6 +/- 3 cm H2O, and the final setting was 4.9 +/- 1.9 cm H2O. Nineteen patients required 24 readjustment procedures (readjustment rate, 38%; readjustment number, 0.48 times per patient). One patient (2%) developed delayed bilateral subdural hematoma after readjustment of his shunt valve setting as an outpatient. CONCLUSION: Starting with a low opening pressure setting on a proGAV adjustable shunt valve does not increase the chances of overdrainage complications and reduces the need for repeated readjustments.

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