

Course of disease in patients with idiopathic normal pressure hydrocephalus (iNPH): a follow-up study 3, 4 and 5 years following shunt implantation.

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BACKGROUND: In spite of recent advances in the diagnosis and treatment of iNPH, favorable outcomes following CSF diversion continue to be limited by complications, both valve dependent and valve independent, as well as by a reduction, over time, in the response to shunting. **MATERIALS AND METHODS:** Between September 1997 and December 2006, 148 patients underwent ventriculo-peritoneal shunt surgery in our department. All patients underwent the implantation of gravitational valves. These patients were followed-up 3, 6 and 12 months after surgery and then at annual intervals. **FINDINGS:** The mean age of the 94 men and 54 women in our study was 68 years. The perioperative mortality was 0.7% (one patient died from a pulmonary embolism). A further 23 patients died during the follow-up period from causes unrelated to iNPH or the surgery. This study reports on groups of patients followed-up for 2 years (n = 92), 3 years (n = 62), 4 years (n = 38) and 5 years (n = 21) postoperatively. Valve independent complications occurred postoperatively in 6% of patients (n = 10). Of these, five patients (3% of the total) had an infection and catheter displacement was recorded in a further five. Valve dependent complications occurred in 24 patients (16%), with overdrainage found in seven patients (5%) and underdrainage apparent in 17 (11%). Responder rates were 79% at 2 years, 79% at 3 years, 64% at 4 years and 60% at 5 years. The optimal valve opening pressure in programmable valves with a gravitational unit was between 30 and 70 mmHg. **CONCLUSIONS:** Sixty percent of patients with iNPH who underwent a ventriculo-peritoneal shunt using a gravitational valve continue to benefit from surgery 5 years postoperatively.