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First experiences with an adjustable gravitational valve in childhood hydrocephalus

**Abstract:**
OBJECT: The goal of this report was to describe the authors' initial experiences with an adjustable gravity-assisted valve (GAV) called the ProGAV in treating childhood hydrocephalus. METHODS: The ProGAV was implanted in 53 children (29 boys and 24 girls, median age 7.3 years) with hydrocephalus of various origins. The ProGAV consists of a differential-pressure unit with adjustable opening pressures and a gravitational unit with a fixed opening pressure. RESULTS: The mean follow-up period was 15.2 months (range 6-44 months). The authors did not observe any valve-related complications. Four infections (7.5%) occurred, warranting the removal of the shunt. In 19 children, the opening pressure was changed at least once during the follow-up period, for underdrainage in 10, overdrainage in 8, and shunt weaning in 1, with substantial clinical improvement in 18 children. Overall, good clinical results were obtained in 47 (88.7%) of the 53 valve placements. CONCLUSIONS: With an overall success rate of 88.7%, the first experiences with the ProGAV in childhood hydrocephalus are promising and justify its further use in the pediatric population.

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