



The Fate of the Failed Endoscopic Third Ventriculostomy

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Introduction

Even though endoscopic third ventriculostomy (ETV) has been established as an effective treatment for hydrocephalus, the outcomes of patients with a failed ETV remain unknown.

Methods

We retrospectively reviewed the medical records of 211 patients from an institutional database of adult patients who underwent ETV from the year 2000 to 2014. We identified 76 patients (36%) with failed ETV. Our criteria for a failed ETV included recurrence of symptoms back to baseline or worse and the requirement of additional cerebrospinal fluid diversion procedures after ETV. The demographics, clinical presentation, surgical treatment and outcomes of the patients with failed ETV were reviewed.

Results

The patients with failed ETV (male: female ratio 1: 1) were aged 24-83 years (average age – 57.7 years). Preoperative symptoms included 57.9% gait imbalance, 44.7% memory loss, urinary incontinence 38.2% and headaches 28.9%. The opening pressures at ETV ranged from 3 to 19 cm H₂O. Following ETV, the rate of symptomatic recurrence included; 45.6% gait imbalance, 32.5% memory loss and 35.5% urinary incontinence. Patients showing no improvement in symptoms after ETV included 34.7% with gait imbalance, 40% memory loss, 45.2% urinary incontinence. Worsening of symptoms following ETV occurred in 19.6% of patients with gait imbalance, 27.5% with memory loss and 19.4% with urinary incontinence. 71% of the patients with failed ETV underwent ventriculoperitoneal shunting, with 72.2% success rate and 20.4% complication rate. Four patients with failed ETV underwent redo-ETV with a success rate of 75%, while 6 patients underwent re-exploration of the third ventricle and were found to have a patent stoma. Seven patients underwent no further surgical intervention and 3 patients are pending further evaluation.

Conclusions

Ventriculoperitoneal shunting and redo-ETV are effective options for treating a failed ETV.

Learning Objectives

To determine the long-term outcomes of hydrocephalus patients with a failed ETV.

References

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