Title:

Territory-wide Ventriculoperitoneal Shunting Outcomes from 2009 to 2011: Multicenter Hospital Authority Clinical Audit

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Abstract:

Ventriculoperitoneal (VP) shunting for the management of hydrocephalus is one of the most common procedures performed in daily neurosurgical practice. Although surgical techniques and perioperative management have reduced the incidence of shunt failure, the procedure is still fraught with potential complications. Approaching a third of adult patients (29%) experience shunt failure within the first year and as high as 59% of patients regardless of age require shunt revision during their lifetime[1]. The aim of this study is to determine the rate of shunt failure in Hong Kong's public health system and identify its causes as well as risk factors.

Methodology

Clinical management system (CMS) inpatient records were reviewed for patients who received primary VP shunting from 1st January 2009 to 31st December 2011 at all seven Hospital Authority neurosurgical centers. Demographic data, operation time, number of surgeons involved, duration from admission to operation and the length of hospital stay were collected from the clinical data analysis and reporting system (CDARS). The primary endpoint was shunt failure requiring reoperation (either due to mechanical obstruction, infection, over drainage or CSF malabsorption at the distal catheter implantation site). Secondary endpoints were 30-day mortality and overall survival.

Results

A total of 108 patients with VP shunts implanted during this three-year period were reoperated. Forty-eight shunts (44% of reoperated cases) were treated as shunt infection and were removed. Forty-three shunts (40%) were either revised or removed due to obstruction. The remaining cases were reoperated due to suboptimal cerebrospinal fluid diversion either as a consequence of over drainage or malabsorption. Further findings will be presented in the meeting.

Conclusions

To be presented in the meeting.

References

1. Wu Y, Green NL, Wrensch MR, Zhao S, Gupta N. Ventriculoperitoneal shunt complications in California: 1990 to 2000. Neurosurgery. 2007 Sep;61(3):557-62; discussion 62-3. Pediatric Neurosurgery. 1994 Jul;10(5):321-7.