

Oral presentation

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## Trends in neuroendoscopic practice into the 21<sup>st</sup> century: a 12 yr review of a single unit's activity

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from 50th Annual Meeting of the Society for Research into Hydrocephalus and Spina Bifida  
Cambridge, UK. 30 August – 2 September 2006

Published: 21 December 2006

*Cerebrospinal Fluid Research* 2006, **3**(Suppl 1):S6 doi:10.1186/1743-8454-3-S1-S6

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### Background

Neuroendoscopy was first introduced in the early 20<sup>th</sup> century, but with little success due to limitations of the equipment available. Technical advances and the vision of a few pioneers led to the redevelopment of the field in the 1970s. By the end of the 20<sup>th</sup> century it had become an established part of general neurosurgical practice and the preferred treatment option for obstructive hydrocephalus. The neurosurgical unit in Nottingham was among the first in the UK to establish a large routine neuroendoscopic practice and was instrumental in extending its applications beyond pure ventriculostomy. Here we report on our trends in neuroendoscopic activity before and after the millennium, over a 12 yr period.

### Materials and methods

A prospective operative record of all neuroendoscopic procedures kept in our department was used to provide the data for this audit along with further clinical and radiological information held on the patients electronic hospital file.

### Results

In the 6 yr period before 2000, 284 neuroendoscopic procedures were carried out in 216 patients. In comparison from 2000 to the end of 2005, 187 procedures were performed in 182 patients. The age range was similar for each period (1 week to 70 and 80 years, respectively) but the average age was higher in the later group. NTV (neuroendoscopic third ventriculostomy) alone was by far the most

common procedure performed (54% and 48%) and was successful in relieving hydrocephalus in 77% of all cases in which NTV was a component up to 2000 and in 66% of cases since this time. Endoscopic biopsies and marsupialisation continued to be performed equally frequently across the 12-year period and with consistent success rates. However, there were fewer procedures carried out for hydrocephalus due to IVH (intraventricular haemorrhage) (18 compared with 55) and shunt dysfunction (10 compared with 83) in recent years. The number of complications since 2000 has fallen, especially in terms of neurological damage, whilst the infection rate has remained at 3%.

### Conclusion

Neuroendoscopy remains a routine and well-established part of neurosurgical practice in Nottingham, providing safe and effective treatment for a number of conditions. However, both the number of procedures and the number of patients treated have dropped in recent years and in particular there has been a drop in treatment for IVH and shunt dysfunction. This reflects both an evolving hydrocephalic population and a refinement of the indications for neuroendoscopy.