

Neurosurgery Abstracts

Title: VENTRICULOPERITONEAL SHUNT FAILURE FOLLOWING EXTRADURAL SPINAL SURGERY IN THE PEDIATRIC SPINA BIFIDA POPULATION: AN INSTITUTIONAL REVIEW

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Background: Spinal deformities in children with spina bifida are extremely common, with a prevalence ranging from 52-89%. Such deformities include scoliosis, congenital and developmental, kyphosis and hyperlordosis. These deformities commonly progress to a magnitude where surgical treatment is considered. Although surgical complications such as spinal infection, pseudarthrosis and implant failure are well documented, other potential complications including shunt failure have not been adequately studied. Therefore the purpose of this project was to determine if extradural spinal procedures are predictive of shunt failure within 1 year of surgery.

Method: We retrospectively reviewed 174 electronic medical records to identify pediatric patients with spina bifida and concomitant shunted hydrocephalus who underwent extradural spinal procedures between 2001 and 2008. We then complemented that data with surgical services data to identify those patients that went on to require shunt revisions. Our patients ranged from 5 years of age to 18 years of age with the average age undergoing an extradural spinal procedure being 12 years.

Results: We identified 21 spina bifida patients with shunted hydrocephalus who went on to have an extradural spinal procedure. Of these patients only 1 required a shunt revision within 3 months, with none of the patients requiring a shunt revision within the 6-month period. Four (20%) of the patients required a shunt revision within 12 months.

Conclusion: Identifying factors that are predictive of shunt failure in patients with hydrocephalus continues to be a challenge. Our data suggests that extradural spinal surgery is not associated with an increased rate of shunt failure.