

nursing role in implanting a management protocol in order to prevent the CSF diversion procedure

**MATERIAL-METHODS:**We retrospectively reviewed the medical charts of all children who underwent posterior fossa surgery for brain tumor in our institution during a 1-year period. Demographic and Clinical data was collected before and after surgery to identify risk factors to develop long standing hydrocephalus

**RESULTS:**Fifteen children underwent posterior fossa surgery for brain tumor. Mean follow up was 1-12 months, the mean age was 10 years (ranged 2-19 ). Patients who presented with hydrocephalus, and the tumor occupied the 4th ventricle underwent EVD insertion prior to tumor resection (5 children). Post-operatively while in PICU the level of the EVD was increased 5 cm daily, and 5 days after the surgery it was closed to monitoring. In another 5 patients the tumor was located in the cerebellar hemisphere and did not penetrate the fourth ventricle. Although these children suffered hydrocephalus, no CSF diversion procedure was performed. Another 4 children had no hydrocephalus, before or after the surgery. Out of the 15 children, one needed VP shunt insertion and one had ETV. Another 2 children have asymptomatic pseudo-meningocele

**CONCLUSION:**We emphasize the nursing role in following the patients with hydrocephalus and in the decision making process of EVD withdrawal strategy. We show that meticulous observation and patience can significantly help in reducing the incidence of VP shunt insertion in children following posterior fossa tumor resection

## NS-008

### **Pediatric endoscopic third ventriculostomy from a nursing perspective (initial single-center experience)**

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**OBJECTIVE:**Operating department nursing has been under much scrutiny recently, with financial restrictions on health service spending and developments in the nursing role. This distinct specialty evolved largely in response to medical advancements and developments in neurosurgical technology. Hydrocephalus affect 0.9 to 1.5 per 1000 births which increases to 1.3 to 2.9 per 1000 birth when congenital abnormalities are considered. Endoscopic third ventriculostomy (ETV) is technique that has gained greater acceptance in recent years with the advent of new endoscopic technology and has now become an accepted mode of hydrocephalus treatment in children. An understanding from a nursing perspective of the special needs of the patient undergoing the procedure is essential to optimum care.

**MATERIAL-METHODS:**A retrospective analysis of initial 7 consecutive ETV procedures because of obstructive

hydrocephalus at the Uzhhorod Regional Clinical Center of Neurosurgery and Neurology. The female-to-male ratio was - 2.5:1. The mean age was 11 (from 4 to 16 years old). A special algorithm was used before and during the procedure by the operating nurse with special attention to endoscopic equipment integrity and its sterility, intraoperative monitoring of intraventricular fluid irrigation to prevent related complications.

**RESULTS:**According to the data, there were no cases of equipment failure, hypothalamus disorders or infection complications among the operated patients. All the patients were assessed according to Karnofsky scale: more than 60 points - 7 (100%) patients. The median follow-up time - 15 months.

**CONCLUSION:**Good nursing care is essential to the successful execution of the procedure because of its strong role in relation to medical assistance and technical preparation. Nurses must remain updated on new technical developments as their use and availability will ultimately impact the care and outcome of the patients.

## NS-009

### **Low Pressure Hydrocephalus in Children: Nursing Implications**

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**OBJECTIVE:**Low pressure hydrocephalus (LPH) is a rare and complex clinical entity associated with significant morbidity and mortality. The disorder is characterized by signs and symptoms of elevated intracranial pressure (ICP), ventriculomegaly on radiographic imaging, and normal to low ICP. The objective of the presentation is to provide an overview of low pressure hydrocephalus in children including the pathophysiology, risk factors, clinical presentation, medical management, and nursing implications.

**MATERIAL-METHODS:**A case report of 6-year old female with a history of a pineoblastoma and shunted hydrocephalus who developed LPH will be presented with a literature review.

**RESULTS:**LPH may develop due to subarachnoid hemorrhage, brain tumors, congenital hydrocephalus, or intracranial infections. A recent study suggests treatment with radiation and/or chemotherapy in young children with metastatic brain tumors and shunted hydrocephalus may contribute to development of LPH. Although the exact pathophysiology is unknown, it is hypothesized to be due to altered brain compliance resulting in persistent ventriculomegaly with low ICP. Presenting symptoms in children with LPH are similar to children in shunt malfunction and include lethargy, headache, nausea/vomiting, bradycardia, and agitation. Clinical signs