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Management of Obstructive Hydrocephalus Secondary to a Posterior Fossa Tumor in Children: About 24 Cases Operated at the Central Hospital of Army

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Abstract : Introduction: This is a retrospective study carried out at the Central Hospital of Army from 2017 to 2022. Its objective is to demonstrate the best surgical method for the management of obstructive hydrocephalus secondary to a posterior fossa tumor in children, in pre, per, and post-operative. Patients and Methods: During this period, 24 children (over 1 year old) were admitted for treatment of the posterior fossa tumor with obstructive secondary hydrocephalus and the majority of whom benefited from VCS followed by surgery and excision, the rest, received after evacuation from other hospital structures, were managed there beforehand with ventriculoperitoneal diversion or external drainage. We found that the way hydrocephalus is managed has implications for subsequent management, hence the need for this study to determine the effectiveness of different surgical procedures used in the treatment of hydrocephalus in these patients. The evaluation is made on the basis of revision rate, complications, survival, and radiological evaluation. Results: 6 patients (25%) received a ventriculoperitoneal shunt (VPD), 15 patients (62%) underwent a ventriculocysternostomy (VCS), and 3 patients (12.5%) received temporary ventricular drainage before or during tumor excision. The post-operative results were almost similar. Nevertheless, a high failure rate (25%) was observed. No deaths are recorded. In total, 75% of children who had a DVP were reoperated. The revision by VCS was performed, in addition to the 4 patients benefiting from a DVP, with one patient having received external drainage, and only one revision of a VCS was recorded. In the two patients who received external drainage, restoration of CSF outflow was observed following tumor resection. Conclusion: VCS is indicated in the first intention in the treatment of hydrocephalus secondary to a posterior fossa tumor, in view of the satisfactory results obtained and the high failure rate in DVP, especially with the presence of metastatic cells in the peritoneum, but can be considered as a second-line treatment.

Keywords : posterior fossa tumor, obstructive hydrocephalus, DVP, VCS
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