



Study of Comparison Between Preoperative Shunting, Extra Ventricular Drainage and Ventriculoperitoneal Peritoneal Shunt- In Cases of Posterior Fossa Tumour

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ABSTRACT

The posterior fossa is the commonest site of primary intracranial tumours. Posterior fossa tumours often present with clinical manifestations of hydrocephalus and raised intracranial pressure. Our study is to study patients of posterior fossa tumor operated preoperatively, Patients divided in three groups, Group A 15 patients treated with external ventricular drain (EVD) and Group B 17 patients treated with ventriculo peritoneal shunt (VPS) prior to actual surgery and Group C 12 patients treated directly with actual surgery. Post operative results were evaluated in all groups and results and complications were analysed which shows treating posterior fossa tumours with marked hydrocephalus, ventriculo peritoneal shunt must be considered prior to actual surgery

KEYWORDS : Hydrocephalus, Posterior fossa SOL, Extra Ventricular Drainage and Ventriculoperitoneal Peritoneal Shunt

INTRODUCTION :-

The posterior fossa is the commonest site of primary intracranial tumours. The commonest neoplasms are pilocytic astrocytoma, medulloblastoma, ependymoma and brain stem glioma¹. These tumours remain the focus of intense research aimed not just at prolonging survival, but also at minimising the impact of treatment on growth, cognitive development and long-term quality of life².

Aims and Objectives :- This study compares external ventricular drain (EVD) and ventriculo peritoneal shunt (VPS) in the treatment of posterior fossa tumours with marked obstructive hydrocephalus.

Material and Methods :- 42 patients with posterior fossa tumours with marked hydrocephalus were studied. Patients divided in three groups, Group A 15 patients treated with external ventricular drain (EVD) and Group B 17 patients treated with ventriculo peritoneal shunt (VPS) prior to actual surgery and Group C 12 patients treated directly with actual surgery. All patients with lesion in posterior fossa diagnosed in MRI are divided in three groups. All patients were subjected to particular surgery as per groups and results tabulated and complications identified in post operative period. Patients who developed post operative hydrocephalus were subjected to VP Shunt later.

Results :- In Group A, post operative hydrocephalus develop in 2 cases, cerebrospinal fluid leakage in 1 case, meningitis occur in 4 patients and 1 patient died after actual surgery. In Group B shunt infection occur in 2 patients and 1 patient died after actual surgery. In Group C 4 patients develop post operative hydrocephalus and 2 patients died after surgery.

Discussion :- Posterior fossa tumours often present with clinical manifestations of hydrocephalus and raised intracranial pressure³. In children over one year old, over two thirds of intracranial tumours arise from the cerebellum or brainstem, compared with 15% in adults^{4,5,6}. Survival rates of some of these lesions has improved markedly over the last twenty years, due to advances in surgical techniques, chemotherapy, delivery of radiotherapy and more recently, an improved understanding of tumour biology⁷.

Conclusion :- Management of hydrocephalus before actual surgery

of posterior fossa tumours decreases the rate of morbidity and mortality⁸. But with ETV, chances of morbidity increases and also it does not protect development of post operative hydrocephalus^{9,10}. Thus treating posterior fossa tumours with marked hydrocephalus, ventriculo peritoneal shunt must be consider prior to actual surgery¹¹.

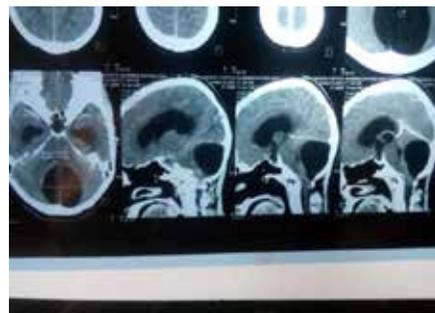


Figure 1: MRI- Posterior fossa tumor with hydrocephalus preoperatively



Figure 2: CT scan with contrast-Post operated case of posterior fossa tumor with VP shunt in situ.

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