

Endoscopic Surgery Of Intraventricular Tumors

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Objective:

The endoscopic resection of intraventricular tumors represents a unique challenge to the neurosurgeon. These neoplasms are invested deep within the brain parenchyma and are situated among neurologically vital structures.

Method:

We have analyzed 36 patients with intraventricular brain tumors who underwent mono- and multiportal endoscopical approaches in treatment. All patients were operated using endoscopic technique (rigid endoscopes, flexible videoscope) and neuronavigation techniques. Follow up period has been 3.0 years.

Results:

All patients have had surgery without intraoperative complications and mortality. We have performed: 1) endoscopic biopsy tumor and/or a ventriculostomy (n=16) (medulloblastoma - 4, astrocytoma – 6, ependymoma – 3, cavernoma -2, unknown - 1); 2) endoscopic biopsy and partial tumor resection (n=4) (ependymoma, astrocytoma, craniopharyngioma, cavernous angioma); 3) endoscopic total removal tumor (n=16) (chorioid papilloma- 3, astrocytoma -3, colloid cyst – 5, breast cancer metastasis – 1, pineocytoma -1). Multiportal approach was performed in 5 cases (4 - chorioid papilloma and 1 tumor of third ventricle roof). We have observed transient complications post-surgery such as growth of ventricular size, paresis of the cranial nerves, seizures.

Conclusions:

Mono- and multiportal endoscopical approaches in treatment of intraventricular brain tumors is minimally invasive, safe and effective surgical method. Carefully planned access using neuronavigation is extremely important for endoscopic treatment. Surgeons learning curve