Intraventricular meningioma case series

2019

A total of 89 surgically treated and histopathologically confirmed intraventricular meningiomas were identified in our institution from 2008 to 2018. Clinical features, neuroimaging findings, surgical records, and prognosis data were extracted and reviewed retrospectively. Group comparison and recurrence-free survival analysis were performed.Female predominance was well established with a sex radio of 2.1:1. Raised intracranial pressure and decline of visual acuity were 2 chief symptoms that patients generally complained of. Preoperative magnetic resonance imaging (MRI) scans were performed in all patients and there was a trend toward lateral ventricular meningiomas were larger in size than others (P = .07). Superior parietal lobule and temporal approach were widely adopted and lateral/4th ventricular meningiomas were more easily to acquire total tumor resection as compared with 3rd ventricular meningiomas (P = .03). After an average follow-up of 57.3 months, 6 patients experienced recurrence of disease in our series. Individuals with subtotal resection (P < .001) and higher World Health Organization classification (P = .001) were more prone to relapse.Intraventricular meningiomas presented with a wide variety of symptoms. Surgery remained 1st treatment of choice and optimal surgical approach should be planned individually based on preoperative MRI evaluation. Patients underwent subtotal tumor resection and with malignant tumor nature should be carefully monitored during follow-up [1)].

2017

The purpose of the study was to investigate the clinical characteristics and long-term outcomes of pediatric patients with intraventricular meningioma. Li et al. retrospectively analyzed a total of 30 pediatric patients with intraventricular meningiomas who were surgically treated between January 2005 and June 2016 and analyzed their clinical characteristics and surgical outcomes. Among the 160 pediatric patients with intracranial meningioma, 33 (20.6%) had intraventricular lesions. However, only 30 patients had complete demographic and clinical data. A male predilection (male/female = 1.5:1) was observed, and the mean age of our patient cohort was 12.6 years. The lateral ventricle was the most common lesion site (88.6%). In addition, the most common initial symptom was headache or dizziness, and the average interval from symptom onset to admission was 19.17 months (0.25-72 months). Twenty-six patients (86.7%) achieved a Simpson grade of I. Based on the WHO classification, 28 (93.3%) meningiomas were classified as grade I, and the remaining two cases were grades II and III. During the follow-up period (0.67-10.08 years), 3 patients experienced tumor recurrence (15, 18, and 83 months, respectively), and 1 patient died of recurrence. Pediatric and adult intraventricular meningiomas present similar clinical characteristics and surgical outcomes; however, intraventricular meningiomas compose a higher percentage of pediatric meningiomas and have a male predilection. Compared with general pediatric meningiomas, pediatric intraventricular meningiomas tend to have higher incidence of benign subtypes. They are also more likely to be completely resected and have lower recurrence and mortality rates [2)].

Ten patients with histologically verified intraventricular meningiomas were treated between 1974 and 1985. There were eight female and two male patients, ranging in age from 25 to 72 years with a

mean age of 45.5 years. Headache and disturbed mentation were the most common presenting symptoms whereas corticospinal disturbance, altered mentation and homonymous hemianopia were the most common signs on formal neurological examination. Papilloedema was demonstrable in 50% of cases and evidence of dysphasia was apparent in 60% of patients with lesions affecting their dominant hemisphere. A single instance of drop attack occurred in a patient harbouring a third ventricular meningioma. Computed tomography, with and without contrast enhancement, and angiography were employed in all cases and proved highly sensitive and specific for tumour localisation and tissue diagnosis. In addition, angiography proved invaluable in demonstrating both vascular supply and the effects imposed upon the surrounding cerebral vasculature by tumour mass and hydrocephalus. Nine tumours occurred in the lateral ventricular trigone of which 5 were left-sided. A tenth tumour was located in the third ventricle. Twelve resections were performed in 10 patients. One patient was found to have a highly malignant cystic meningioma which recurred within 10 weeks of the original surgery and proved fatal shortly thereafter. A second patient whose initial resection was subtotal had a recurrence 3 years postoperatively which was totally resected. Lesions were approached most commonly through the posterior middle or posterior inferior temporal gyri. On 3 occasions a right posterior middle frontal gyrus approach was used and in one case a posterior parieto-occipital cortical incision was employed [3].

The clinical and neuroradiological findings and the surgical results in a series of 18 patients with meningiomas of the lateral ventricles, operated on over a 23-year period, are described. This experience is compared with previously reported series and the following conclusions are drawn: 1) these tumors have no characteristic symptomatology; 2) the preoperative diagnosis should be reached by means of both computerized tomography and carotid and vertebral angiography; 3) the safest surgical approach is through a sagittal paramedian parieto-occipital cortical incision; and 4) piecemeal removal is crucial for achieving total extirpation of the tumor with minimum damage of the surrounding brain tissue and for careful intraoperative hemostasis [4].

1)
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