Endoscopic endonasal extended transsphenoidal removal of tuberculum sellae meningioma (TSM): an experience of six cases.

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Abstract
Aims. Tuberculum sellae meningiomas (TSMs) are usually removed through a transcranial approach. Recently, the sublabial transsphenoidal microscopic approach has been used to remove such tumours. More recently, endonasal extended transsphenoidal approach is getting popular for removal of tuberculum sellae meningioma. Here, we describe our initial experience of endonasal extended transsphenoidal approach for removal of suprasellar meningiomas in six consecutive cases. Materials and method. Six patients (four female and two male) who presented for headache and visual loss were investigated with MRI of brain that showed tuberculum sellae meningioma compressing visual apparatus. Average size was $3 \times 3$ cm in three cases and $4 \times 4$ cm in rest of the three. All patients underwent endoscopic endonasal extended transsphenoidal tumour removal, but in two patients with large tumour, microscopic assistance was needed. Complete tumour removal was done in all cases except one case where perforators seemed to be encased by the tumour and resulted in incomplete removal. The surgical dural and bony defects were repaired in all patients with thigh fat graft. Nasal packing was not used, but inflated balloon of Foley's catheter was used to keep fat in position. Result. There was mild postoperative cerebrospinal fluid (CSF) leakage in one patient on the fourth postoperative day after removal of lumbar CSF drain and stopped spontaneously on the seventh postoperative day. There were no postoperative CSF leaks or meningitis in the rest of the cases. In one patient, there was visual deterioration due to pressure on optic nerve by grafted fat and improved within 4 weeks. Four months after surgery, three patients had normal vision, two patients improved vision comparing with that of preoperative state but with some persisting deficit; one patient had static vision, no new endocrinopathy and no residual tumour on MRI in five cases but residual tumour in remaining case was static at the end of the ninth month. Conclusion. The endoscopic endonasal extended transsphenoidal approach appears to be an effective minimally invasive method for removing relatively small to medium tuberculum sellae meningiomas. With more experience of the surgeon, larger tuberculum sellae meningioma may be removed by purely endoscopic techniques in near future.

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