

Endoscopic Endonasal Resection Of Suprasellar Craniopharyngeomas

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Introduction

To evaluate the outcome and complications after endoscopic endonasal resection of suprasellar craniopharyngeomas.

Methods

We retrospectively analysed all patients harboring a suprasellar craniopharyngeoma who underwent endoscopic endonasal resection in our institution with special regard to the extent of resection, perioperative complications, recurrence rates, and visual and endocrinological outcome.

Results

14 patients underwent endoscopic endonasal resection of a suprasellar craniopharyngioma. There were 8 male and 6 female patients. Mean age was 48 years ranging from 12 to 84 years. Mean follow up time was 51 months ranging from 4 to 124 months. Eleven patients complained of loss of visual acuity and 9 patients of visual field deficits. Two patients presented with headache. Eight patients were endocrinological intact. Two patients presented with Addison crisis. Four patients had pituitary insufficiency.

Gross total tumor resection was achieved in 7 patients, near total tumor resection in 3. In 4 patients, only a partial resection to decompress the chiasm was performed in order to preserve pituitary function (all patients were endocrinologically intact and underwent radiation after surgery). The pituitary stalk was identified early in all patients. It was preserved in 11 patients and sacrificed in 3. The skull base defect was reconstructed with a nasoseptal flap in all, but one patient in whom a fat graft was used.

There was no mortality. No deterioration of visual acuity or visual field was seen. On the contrary, all patients with visual field deficits and loss of visual acuity improved after surgery. Three patients who were endocrinologically intact developed complete anterior pituitary gland deficiency. Permanent diabetes insipidus occurred in 5 patients. CSF fistulas occurred in 4 patients. Two of these patients who presented with hydrocephalus before the surgery required a vp shunt to stop the fistula. There were two recurrences in the gross total resection group, and one in the near total resection group. All patients underwent fractionated radiotherapy (54 Gy) and all tumors decreased in size.

Conclusion

The endonasal route is an ideal approach to suprasellar craniopharyngeomas. It provides an excellent visual outcome and early identification and consecutive preservation of the pituitary stalk. However, despite the nasoseptal flap there is still a significant rate of CSF leaks.