Abstract

The objective of this article is to present the recurrence pattern of olfactory groove meningiomas after surgical resection. Four patients, one female and three males, with surgically resected olfactory groove meningiomas presented with tumor recurrence. All patients underwent resection of an olfactory groove meningioma and later presented with recurrent tumors. The mean age at initial diagnosis was 47 years. All presented initially with vision changes, anosmia, memory dysfunction, and personality changes. Three patients had a preoperative MRI scan. All patients had a craniotomy, with gross total resection achieved in three, and 90% tumor removal achieved in the fourth. Involved dura was coagulated, but not resected, in all cases. Three patients were followed with routine head CT scans postoperatively, and none was followed with MRI scan. The mean time to recurrence was 6 years. Three patients presented with recurrent visual deterioration, and one presented with symptoms of nasal obstruction. Postoperative CT scans failed to document early tumor recurrence, whereas MRI documented tumor recurrence in all patients. Tumor resection and optic nerve decompression improved vision in two patients and stabilized vision in two. Complete resection was not possible because of extensive bony involvement around the anterior clinoid and inferior to the anterior cranial fossa in all cases. Evaluation of four patients with recurrent growth of olfactory groove meningiomas showed the epicenter of recurrence to be inferior to the anterior cranial fossa, with posterior extension involving the optic canals, leading to visual deterioration. This location led to a delay in diagnosis in patients who were followed only with routine CT scans. Initial surgical procedures should include removal of involved dura and bone, and follow-up evaluation should include formal ophthalmologic evaluations and routine head MRI scans.