Meningioma in Neurofibromatosis Type II

Gregory P. Lekovic MD, PhD; Marc S. Schwartz MD
House Institute

Introduction

Meningioma constitutes a significant disease burden for patients with NF2. We present our experience with intracranial meningioma in NF2 with regard to indications for treatment, goals of surgery, and outcome.

Methods

The charts of all patients followed by an interdisciplinary NF2 tumor board at the House Research Institute between 2005 and 2010 were retrospectively reviewed; patients undergoing craniotomy or stereotactic radiosurgery (SRS) for the primary indication of meningioma by the authors were included in the study population. Patients operated on for other indications (e.g. vestibular schwannoma) in whom meningioma was coincidentally removed were excluded.

Results

144 patients were identified, of whom 11 (4M:7F; age 19 -56) underwent a total of 22 procedures (18 craniotomy and 4 SRS) for 18 meningiomas. Indications included symptomatic growing tumor (n=11) and rapid tumor growth (n=7). Locations included skull base (n=6); falx (n=4); tentorium (n=3); pineal (n=2); convexity (n=2), and intraventricular (n=1). Extent of resection was gross total (n=12); subtotal (n=5), biopsy (n=1). Follow up was 6-108 months. Indications for SRS included unresectable tumor (n=1), recurrence (n=2), and medical contraindication to surgery (n=1). All tumors were WHO grade I except one WHO grade II tumor that recurred after GTR requiring both re-resection and SRS. There was one other recurrence of sub-totally resected tumor. Morbidity included brachial plexopathy (n=1) and hydrocephalus (n=2). There were no mortalities.

Conclusions

The indications, techniques and goals of surgery are different in the NF2 population from sporadic menginioma. We are unable to verify a high incidence of atypical meningioma in the NF2 population as has been recently reported elsewhere. In spite of the high prevalence of meningioma in NF2, we conclude that most meningiomas in NF2 can be followed safely without intervention.