

Introduction

Seizures represent a common presentation of intracranial meningiomas occurring in 13–60 % of patients.

Methods

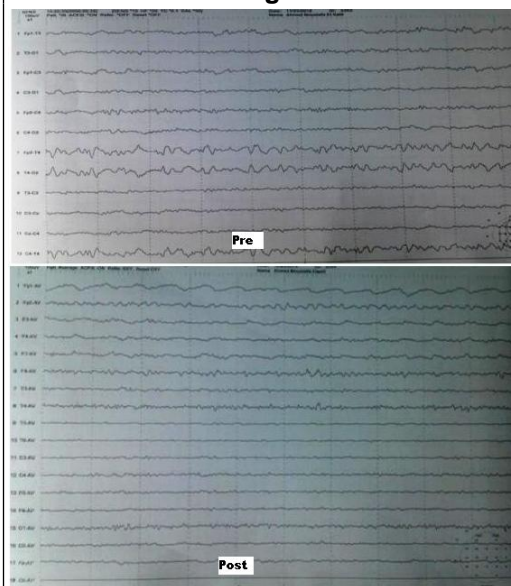
This prospective study includes 40 cases with intracranial meningioma admitted to the Neurosurgery Department, Alexandria University, between June and December 2014. We studied the impact of several factors on seizure occurrence following meningioma excision. Patients with recurrent or multiple meningiomas were excluded. All patients were followed up at least for one year.

Results

Patients were classified into 2 groups; Group "A" (20 patients) with history of preoperative seizures and Group "B" (20 patients) with no preoperative epilepsy. Three patients (15%) from the later group developed new onset seizures after surgery, where as 12 patients (60%) from group A developed at least a single seizure post-operatively. Partial seizure with secondary generalization was the most common epilepsy pattern. The mean age was 50.65 years in group A, and 47.15 years in group B. The female to male ratio was 2.3:1 in both groups. Manifestations of increased intracranial pressure were more common in group A; however, no statistically significant relation was found between the age, gender, clinical presentation, tumor site, side and size and the occurrence of seizures.

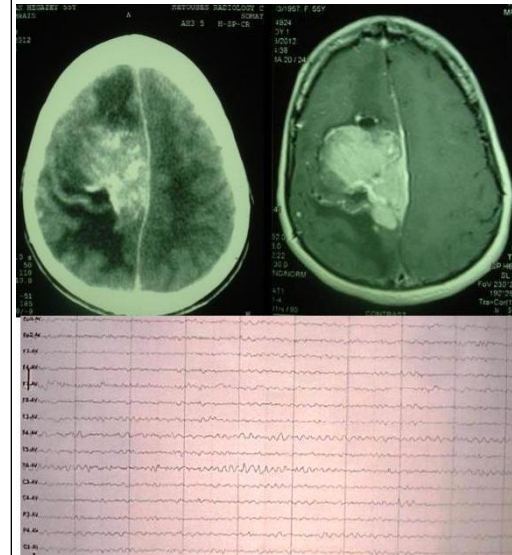
Peritumoral edema was present in 14 (70%) patients of group A, compared to 6 (25%) patients of group "B". There was a statistically significant relation between peritumoral edema and seizure occurrence. Meningiothelial meningioma was the most common histopathological type in this series. There was no statistically significant relation between the different histopathological types and occurrence of epilepsy. The presence of postoperative contusions or hematomas was found to be significantly associated with postoperative epilepsy.

Group A: EEG of a case of left temporal meningioma



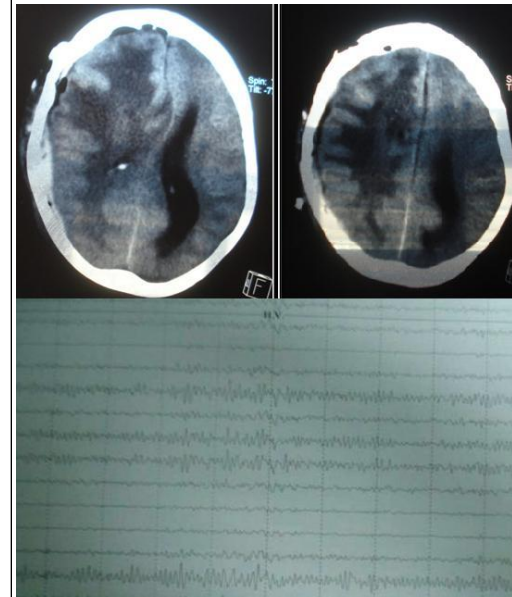
Pre-op EEG showing right temporal epileptiform activity and normal post operative EEG after complete resection

Group B: Right parasagittal meningioma



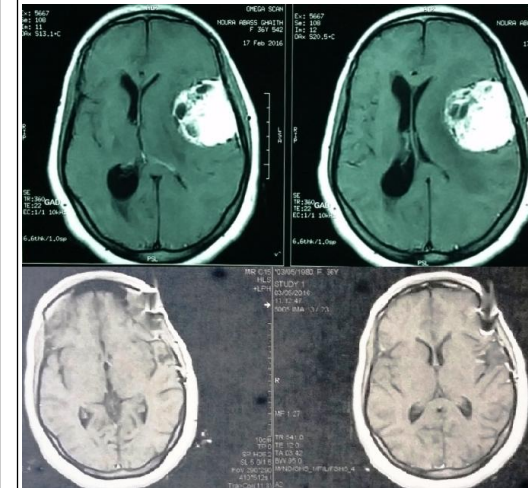
pre-op. imaging and normal EEG

Post-operative imaging and EEG



generalized epileptiform activity

Group A



pre- and post-operative MRI of a 36 year old female with a history of pre-op seizure. she was able to stop antiepileptic drugs 6 months after surgery

Conclusions

Meningioma excision has fair effect on seizure control. The presence of Peritumoral edema pre-operatively and the occurrence of postoperative complications are important predictive factor for seizure occurrence and control after excision.