

## Olfactory Groove Meningioma: Clinical Presentation and Surgical Outcomes of Subfrontal Approach, Experience of The National Institute of Neurology of Tunisia

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### Introduction:

OGM are rare and usually benign tumors that arise from the midline of the anterior fossa at ethmoidal cribriform plate [1]. They have some particularities comparatively to other intracranial meningiomas. OGM are slow growing tumors. Thus, patients are asymptomatic for a long period before diagnosis. The most common presenting symptoms are headaches, olfactory disorders, personality changes and visual impairment. Surgery, aiming to perform a complete tumor removal, is the main treatment. However, nearness to vascular and neural structures and extension into paranasal sinus rise real challenges. We intend through this series to review clinical presentation, radiological characteristics and surgical outcomes of OGM.

**Objectives:** Between January 2010 and December 2016, 25 patients were admitted in the neurosurgery department of the National Neurology Institute of Tunisia for OGM. Data obtained from each patient's medical file was reviewed. Computed tomographic (CT) scans and/or magnetic resonance imaging (MRI) have assessed the diagnosis. All patients were operated on through a sub-frontal approach. Diagnosis was confirmed by anatomic pathological examination. Seventeen patients (68%) had regular follow up in which clinical and imaging findings were reported. The mean follow-up period was three years.

**Results:** The mean age of the patients was 49 years (range 23 - 74 years old). The female-to-male ratio was 1, 8. The mean consultation period was 10 months. The clinical findings revealed olfactory impairment as the most frequent symptom in 15 patients (60%), followed by headache in 14 patients (56%), seizures in 8 patients (32%), blurred vision in 7 patients (28%) and psychiatric disorders in 5 patients (20%). Progressive decreased visual acuity led to blindness in 2 patients. Physical examination revealed motor paresis in 2 patients (8%). Exophthalmia was noted in one patient (4%). Fundus examination revealed papillary edema in 3 cases (12%) and optic atrophy in 3 cases.

**Conclusions:** OGM are rare tumors with a particular clinical presentation. Advances of microsurgical techniques improved morbidity and mortality rates. The choice of surgical approach depends on surgeon's experience, tumor size and extent. A complete tumor removal is the aim of surgery which is often challenging due to anatomical and functional constraints.