

Surgical management of giant skull osteomas

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ABSTRACT

Objective: Surgical management of giant skull osteomas. Osteomas are benign, generally slow growing, bone forming tumors limited to the craniofacial and jaw bones.

Materials and Methods: A retrospective review of all cases of osteoma diagnosed from 2009 to 2013 treated in our hospital. The data collected included age at diagnosis, gender, lesion location, size, presenting and duration of symptoms, treatment, complication and outcome.

Results: During our study period there were 15 cases that were treated surgically. Their mean age was 42 years (range: 15–65 years) and all of our patients were female. The average duration of symptoms was 3 years and size varying from 4 cm to 12 cm. Eight patients complained of headache, whereas 6 patients complained about esthetics, and 1 patient presented with proptosis. The tumor was excised by cutting the base of the tumor and then residual tumor was grinded using a round head cutting bar. Osteoma was removed with esthetically acceptable appearance.

Conclusion: There were no major complications during operative and postoperative period. Although osteomas are usually slow growing but surgery is usually performed due to esthetic reasons. It is important to plan an appropriate surgical approach that minimizes any damage to the adjacent structures.

Key words: Craniectomy, giant osteoma, histopathology

Introduction

Osteomas are the most common of the primary benign bone tumors of the skull and facial structures. They can be subdivided into bone surface tumors (or exostoses) that primarily involve the cranial vault, mandible, and external auditory canal and the more common sino-orbital (or paranasal sinus) osteomas that arise from bones that define the paranasal sinuses, nasal cavity, and orbit.^[1,2] Osteomas are mainly asymptomatic and account for 0.43% of tumor in the general population with an incidental finding on 1% of plain radiographs and on 3% of computed tomography (CT) scans.^[1]

Osteomas have a tendency to grow slowly and therefore these tumors are usually asymptomatic. Tumor size, location, and extension determine the clinical manifestations. These solid nodular sclerotic lesion usually arise from the outer table and are usually <10 mm but lesions larger than 30 mm in diameter are considered giant tumors.^[3,4]

The aim of this study is to retrospectively evaluate patients who had giant skull osteomas and to analyze the clinical, radiological, and surgical aspects of these lesions.

Materials and Methods

Patient population

Between 2009 and 2013, 15 consecutive patients with giant osteomas were treated surgically in our department. The patient population consisted of adult female patients ranging in age from 15 to 65 years (mean 42 years) with giant cranial osteomas involving the cranial vault and some with extension into the paranasal sinuses or orbital wall.

Imaging features

All patients underwent neurological and radiological evaluation in the preoperative period, including: Plain radiographs; head CT scans; and also three-dimensional (3D) cranial CT [Figure 1]. The thickness and dimensions of each osteoma were measured along with the origin and its extension.

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