

## Management of recurrent maxillary osteoma in 5 year old girl: A Case Report

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**Abstract:** Osteoma are benign osteogenic lesions characterized by proliferation of either cancellous or compact bone and can be central, peripheral or extraskeletal. They may arise in medullary (endosteal) bone or on the bone surface as a polypoid or sessile mass (periosteal). The most common site is in the skull. When affecting the facial bones, they are frequently found in the mandible, the most common locations being the posterior lingual surface and the mandible angle area and it is rarely affecting maxilla. We present a case of management recurrent osteoma of the maxilla in a 5 year-old girl.

**Keywords:** Osteoma, Maxilla, pediatric, recurrent

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### I. Introduction

Osteomas are common benign osteogenic lesions of the maxilla. They are benign tumours that consist mainly of mature compact or cancellous bone. Osteomas grow slowly and they may extend to surrounding structures, which can result in severe complications such as orbital involvement or intracranial invasion [1] Many patients diagnosed with an osteoma of the maxilla are asymptomatic. These lesions are generally discovered incidentally during radiographic evaluation for unrelated problems such as minor trauma. Maxillary osteoma is rare in children and here we present a case of management of recurrent anterior maxillary osteoma in a 5 year old girl.

#### Case Report:-

A 5 year girl came to our centre with chief complain of intraoral swelling in anterior region of upper jaw since last 6 months [fig 1]. She underwent surgery for the same tumor at the age of 3 years. Her parents noticed a small swelling six months before which slowly increased to present day size. On examination, buccal mucosae were normal. On palpation there was no tenderness. Examination of the nose showed swelling in anterior nasal floor.

Axial CT scan revealed a bony mass arising from the anterior region of the maxillary jaw which was 2.5 x3.5cm in size [fig 2]. Routine blood and urine examinations were within normal limits. Under general anaesthesia bony mass was surgically excised from anterior region of upper jaw [fig 3]. The resected specimen was submitted for histopathological evaluation and diagnosed as osteoma. The histopathological examination shows trabeculae of cancellous bone and few areas of compact bone showing moderate amount of marrow tissue. Few trabeculae are showing osteoblastic rimming. Bony trabeculae appear to be normal. Marrow spaces containing blood elements, collagen fibres, fibroblast and fatty tissue are seen suggestive of osteoma [fig 4]. The postoperative period was uneventful following surgery. Digital X-ray did not show any recurrence of growth after 1 year with good post operative healing [fig 5].

### II. Discussion

Osteomas are the most common fibro-osseous lesions in the maxilla [2]. They may be classified as peripheral, central or extra skeletal [3]. Peripheral osteoma occurs mainly in the head and neck region. The pathogenesis of osteoma remains controversial. There are three accepted theories of the aetiology of osteoma: developmental, traumatic and infectious. A possible aetiological factor includes the stimulation of embryologic cartilaginous remnants. Kaplan et al [1] suggested that a combination of trauma and muscle traction may play a role in its development. Histopathological appearance includes abnormal bone structure, dense compact bone and the absence of Haversian systems. Osteomas can occur at any age, but are more common in young adults.

According to some authors, they are more common in males [6], whereas others report that they are more common in females [2]. The maxillary sinus is involved in less than 2% of all cases, usually on the lateral wall of the sinus.

In our case patient was 5 year old girl and the osteoma arose from the maxillary alveolus. Many patients diagnosed with an osteoma of the maxillary arch are asymptomatic. They are discovered incidentally during radiographic evaluation for unrelated problems such as minor trauma. Delay in diagnosis has been attributed to the fact that these lesions are asymptomatic when they are small.

The clinical signs, symptoms and complications depend on the location, size and growth direction of the lesion. Symptoms related directly to an osteoma generally arise from a “mass effect” as the lesion impinges on normal structures. Maxillary osteomas are slow growing and usually asymptomatic, but they may be symptomatic depending on the location and onset. Thus, an anterior extension may lead to facial deformity. Continued growth may completely obstruct the sinus ostia or nasal cavity and lead to the development of mucoceles. Presenting symptoms

are pain, swelling, sinusitis and nasal discharge. Rarely, they may expand into the orbit causing diplopia, ptosis and decreased visual acuity [6].

Pain may or may not be related to an osteoma, especially if the location of the pain and the osteoma are not congruent. When a patient complains of headache in the vicinity of an osteoma, and other pathologies leading to headache has been ruled out, excision is indicated [3].

Osteomas may be solitary or multiple. Multiple osteomas of the facial skeleton may occur in cases of Gardner syndrome. No such lesions were found in our patient. Diagnosis and evaluation of the extension of the tumour in all three dimensions can be achieved with radiographs and CT, although the latter is more precise in delineating an osteoma. Asymptomatic osteomas may not require intervention, while symptomatic osteomas definitely require surgical excision [1]. Since most osteomas are asymptomatic, many investigators advocate periodic imaging to follow their growth and intervene before the development of complications.

Osteomas that do not cause symptoms, but are shown in serial radiographs to be fast growing and have the likelihood of producing symptoms in the future may require removal. Indications for surgical treatment include serious cosmetic disfigurement, limitation or loss of function, significant growth rate or need for definitive histopathological diagnosis. Treatment of osteoma consists of complete surgical removal at the base where it unites with the cortical bone [3].

The surgical procedure depends on the location, extent and existing complications. There are no reports of osteomas undergoing malignant transformation. There is one reported case of recurrence [7].

### **Acknowledgement**

we are thankful to Dr Barkha Nayak Reader in oral and maxillofacial pathology for providing photomicrographs and histological description.

### **Conflict of interest**

we state that there are no financial or personal conflicts of interest with this article.

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### **Figure Captions:-**

**Fig A1 & A2** –Preoperative photographs

**Fig B1 & B2** – Axial CT scan revealed a bony mass arising from the anterior region of the maxillary jaw which was 2.5 x3.5cm in size

**Fig C** - Intraoperative photograph

**Fig D** – Excised specimen

**Fig E** –Histopathological picture(40x)(10x)

**Fig F**- Postoperative photograph