

## Case Report

# OSSIFYING FIBROMA INVOLVING MAXILLARY & ETMOIDAL SINUSES: A RARE CASE REPORT

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## ABSTRACT

Ossifying nasal fibroma, a benign osseous tumour, is a rare entity with just 200 cases reported in the world literatures till date. It is probably odontogenic in origin with aggressive behaviour and high tendency for recurrence. We report a case of a large ossifying fibroma in a 36 year old female who presented to our outpatient department 6 months back with complaints of swelling in the right maxillary region. Nasal endoscopic examination and CT- scan were gold standards for diagnosis. This bony tumour were found to be extending into right maxillary and ethmoid sinuses. The tumour was excised by a mid facial degloving approach as attempts of endoscopic excision failed due large size of the same. The rarity of its occurrence has prompted us to report the case as it should be kept in mind as a possible differential diagnosis for such masses.

**Keywords:** Ossifying Fibroma, Maxilla, Ethmoid

## INTRODUCTION

Ossifying fibroma is considered a benign osseous tumour, odontogenic in origin and is believed to be derived from cells of periodontal ligament. This is a layer of fibrous connective tissue surrounding roots of teeth. It is very closely related to other lesions such as fibrous dysplasia, periapical dysplasia or cemento-osseous dysplasia. There is a female predilection with female to male ratio being 5:1. Aggressive lesions usually involve the maxillary antrum. The 1992 WHO classification groups it under a simple designation of two histological types: cementifying fibroma and ossifying fibroma that may be radiologically undistinguishable.

## CASES

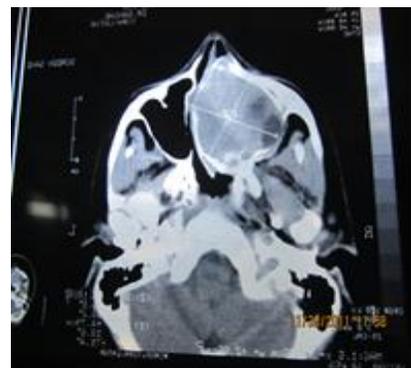
A 36 year female patient presented with swelling over the right maxillary region. The patient stated that the mass first appeared 2 years ago and had been increasing in size since then. She had difficulty in mastication and no complaints of pain or dysphagia. No significant past history. The physical



**Figure 1:** Image of patient showing swelling in right maxillary region



**Figure 2:** CT scan showing extension of the tumour



**Figure 3 :** CT scan showing the site and size of the tumour

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examination revealed a well-defined large circumscribed mass lesion with tenderness over right maxillary and ethmoidal sinus regions. A nasal endoscopic examination confirmed the tumour was hard, encapsulated, well defined, did not bleed on probing and extended from the right maxillary to the right ethmoidal sinuses. The contrast CT scan showed expansile lytic lesion of size 5x4x3.8 cms with osseous fragments extending into the right maxillary and ethmoidal sinuses (Figures 2 and 3)

Due to the large size, attempts of endoscopic excision failed and on table prompt decision was taken to excise the tumour by a mid facial degloving approach. Incision was taken and a direct access to maxilla was obtained. Removal of tumour was carried out under proper haemostasis and aseptic precautions. Incision was closed with absorbable sutures. Except for a mild oedema over the maxillary area, rest of the postoperative period was uneventful. Stiches were removed on day 7 and patient discharged fit and fine. The patient has been following up with us every month since 6 months, no evidence of recurrence is noted on endoscopic examination of sinuses.



**Figure 4: Intraoperative picture of incision taken**



**Figure 5: Intraoperative picture of removal of fibroma**

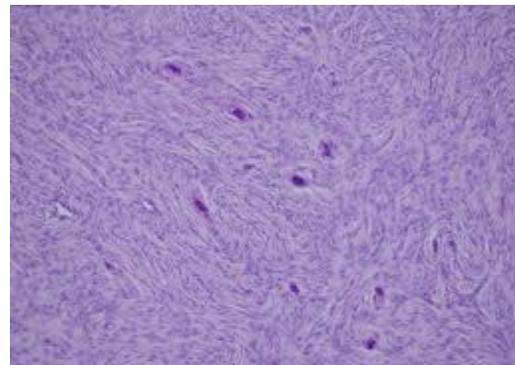
### Histopathological Diagnosis

Gross – Specimen weighed 28 grams and was 4x3.5x5cms size tan white coloured partly encapsulated well circumscribed tumour (Figure 6).

Microscopically – showed haphazardly arranged spindle cells with monomorphic nuclei, stroma showed lying down of irregularly outlined osteoid. A small focus of psammoma like calcification was also seen. All the above findings confirmed the diagnosis of an ossifying fibroma (Figure 7).



**Figure 6: Gross Image of excised specimen**



**Figure 7: Histopathology image showing characteristic fibroma**

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### **DISCUSSION**

Ossifying fibroma is a distinct form of benign fibro osseous lesion. They are thought to arise from periodontal ligament and are composed of varying amount of bone and fibrous tissue (Kramer 1992). It is more common in females than males usually between 20 to 40 years of age. These lesions are known for their aggressive behaviours and tendency for recurrence. When tumour arises in children it is usually of the aggressive type and is called juvenile aggressive ossifying fibroma (Cohn, 2002).

Maxillary lesions are large at the time of presentation, indicating the capacity of the tumour to expand freely within the maxillary sinus. The pathological examination showed a benign fibro osseous proliferation composed of bony spicules and spherules admixed with a fibrous stroma. The lesion was hypocellular with absence of mitotic activity. The maxillary ossifying fibroma displays greater degree of immaturity than mandibular lesions (Fujimoto, 2007).

Radiologically ossifying fibroma may show different patterns based on mineralized tissue. It presents as a well demarcated lesion with different degree of opacification. It can cause root resorption and tooth displacement (Mac Donald, 1999).

The differential diagnosis includes other lesions that contain radioopacities within a well defined radiolucent mass. These lesions are chondrosarcoma, osteosarcoma, fibrous dysplasia, odontogenic cysts and Pindborg tumour. The recommended treatment is complete excision of the tumour (Bradmann, 1997). Central ossifying fibromas are easy to resect but those involving the maxilla is difficult to resect completely.

Recurrence has been reported in as many as one third patients with mandibular lesions and is unknown in cases involving maxilla. But surgical removal of maxillary is difficult due to large size of lesion at the time of presentation (Sanchis, 2004).

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