Ossifying Fibroma of Nasal Cavity

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Introduction

Ossifying fibroma is a mre slow-growing benign tumour of fibro osseous tissue which can behave in an unpredictable aggressive fashion[1]. Pathologically, it is the process of replacement of normal osseous structures by fibrous connective tissue, containing calcification of various types and amounts[2]. In the head and neck regions it can arise anywhere within the facial skeleton and skull[3]. The most common sites are mandible and maxilla[4] with other sites having been reported sporadically such as parietal[5], occipital[6], tempoml[7] and sçthenoid bones[8], nasopharynx[9]. sella turcica[10] and nasalcavity[11]. The nasal cavity is one of the rarest sites for this lesion. On reviewing the literature, we could find only one case of ossifying fibroma in the nasal cavity reported so far[11].

Case Report

A 15 years old girl presented with a 6 months history of nasal obstruction, nasal deformity and headache. Examination revealed mild nasal deformity with grossly deviated nasal septum to the right. The left nasal cavity was completely occupied by a firm, pink coloured mass, whichbecanie pale on pressure. CT scan showed a predominantly non-enhancing, expansile mass in the left nasal caviw with expansion and scaHoping of bony septum and lateral nasal wall (Figure 1).

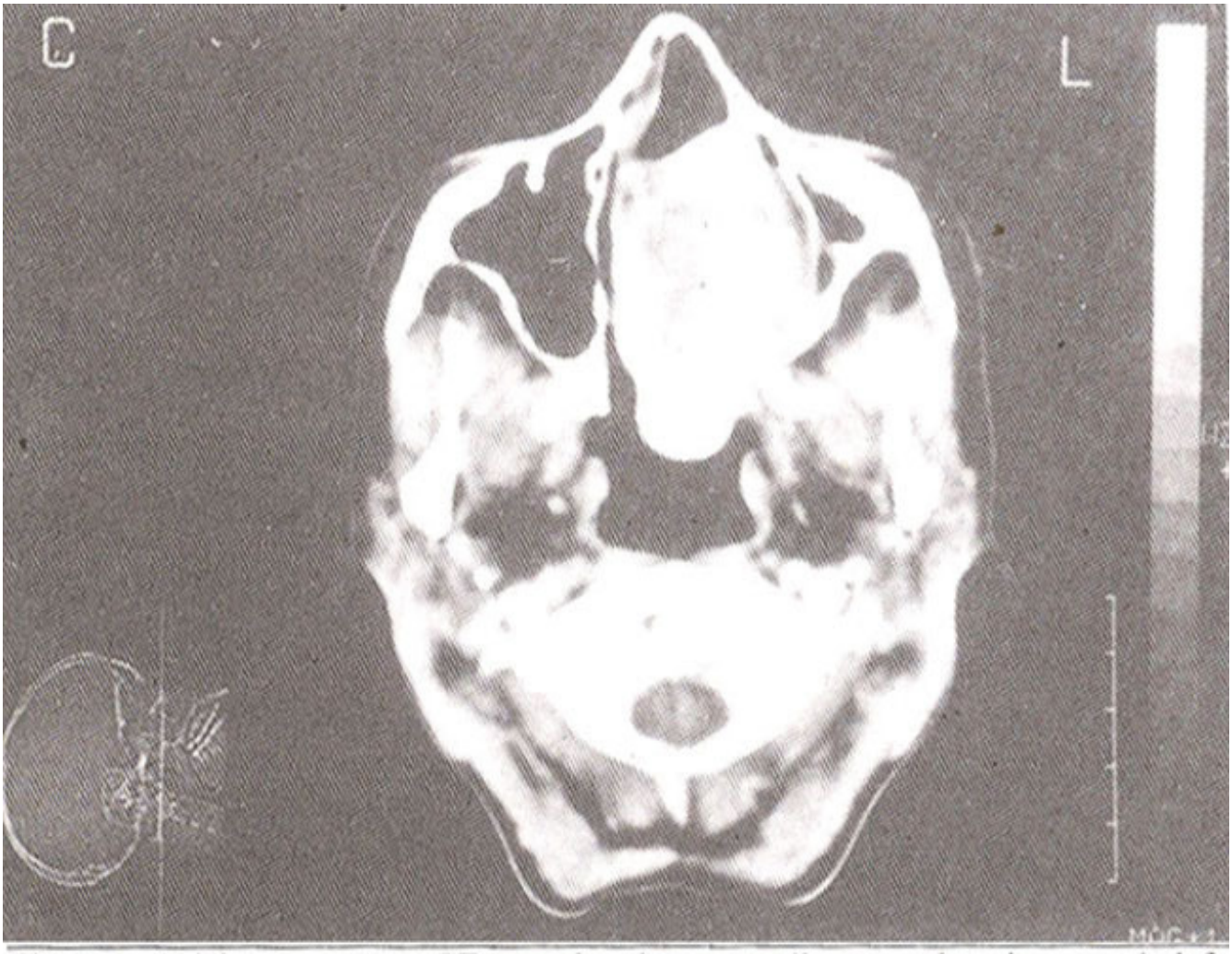

Figure 1. Axial post-contrast CT scan showing expansile, non enhancing mass in left nasal cavity with expansion and scalloping of bony septum and lateral nasal wall.

No bony destruction or extension into adjacent sinuses was noted. Biopsy of the mass showed fibrocellular lesion with deposition of osteoid and ossification consistent with ossifying fibroma. The tumour was completely removed via a lateral rhinotomy approach (Figure 2).

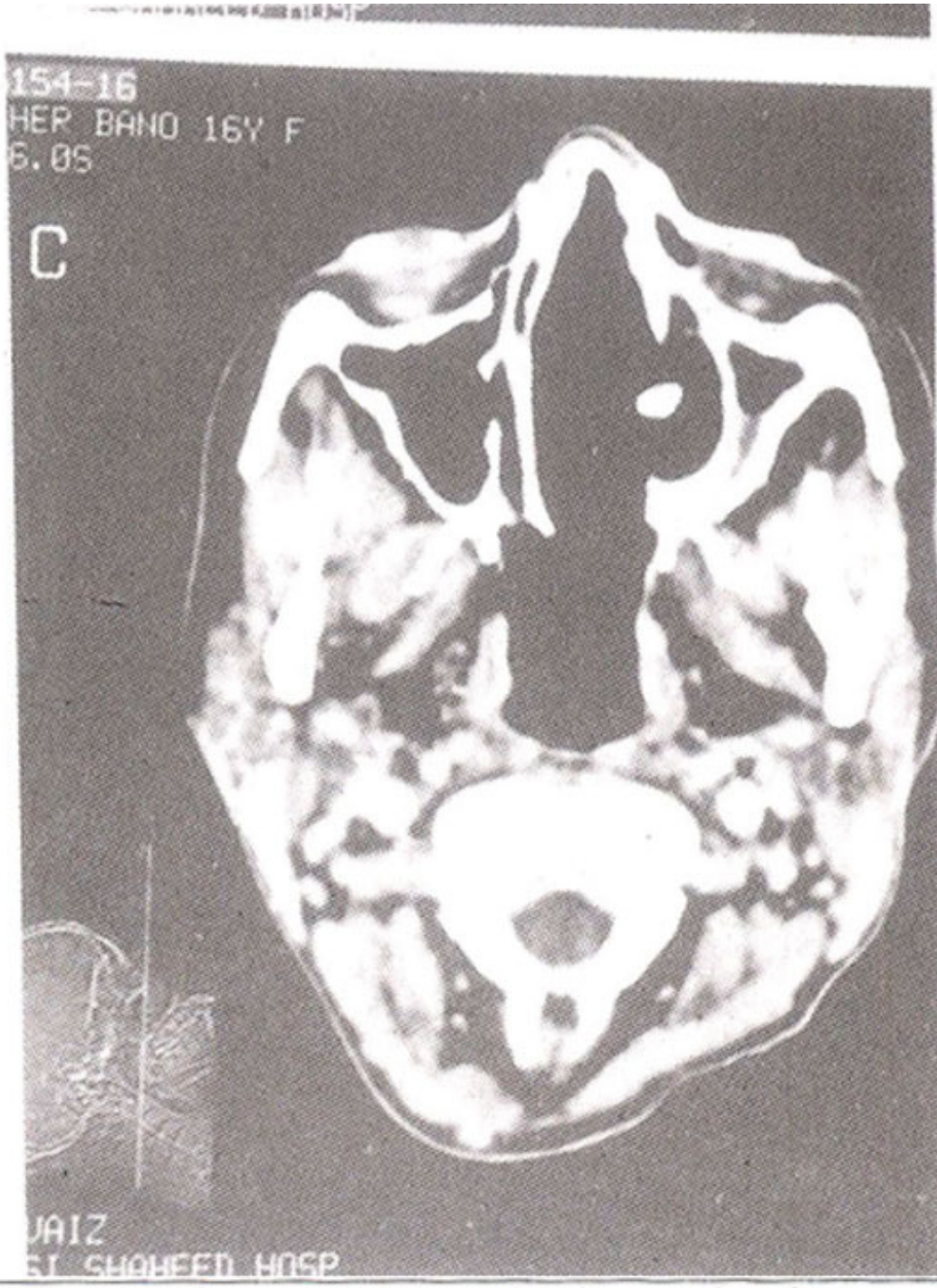

Figure 2. Post-operative contrast CT scan showing complete clearance of the nasal mass.

Histopathology of the specimen confirmed the diagnosis of ossifying fibroma after immunochernical staining with monoclonal antibodies. Three years follow-up showed no recurrence.

Discussion

The term ossifying Fibroma was first described by Menzel in 1872[3]. Being a lesion with fibrous and osseous components, it shares the histological picture with other lesions like fibrous dysplasia, cemento-ossifying fibroma and cernentifying fibroma. However, ossifying fibroma is made of cellular

fibrous connective tissue stroma with varying degress of cellularity and no initotic activity. One may find trabeculac of lamellar bone, rimmed by osteoblasts. There are also numerous small rounded psanmoma-like bodies present in the cellulartissue in 60% of cases[12]. The histopathology of the mass from nasal cavity in our case, revealed a cellular lesion comprising of spindle cells with elongated nuclei, exhibiting minimal degree of nuclear pleomorphism and hyperchromasia. Focally, laminated and granular calcification was seen with deposition of osteoid (Figure 3).

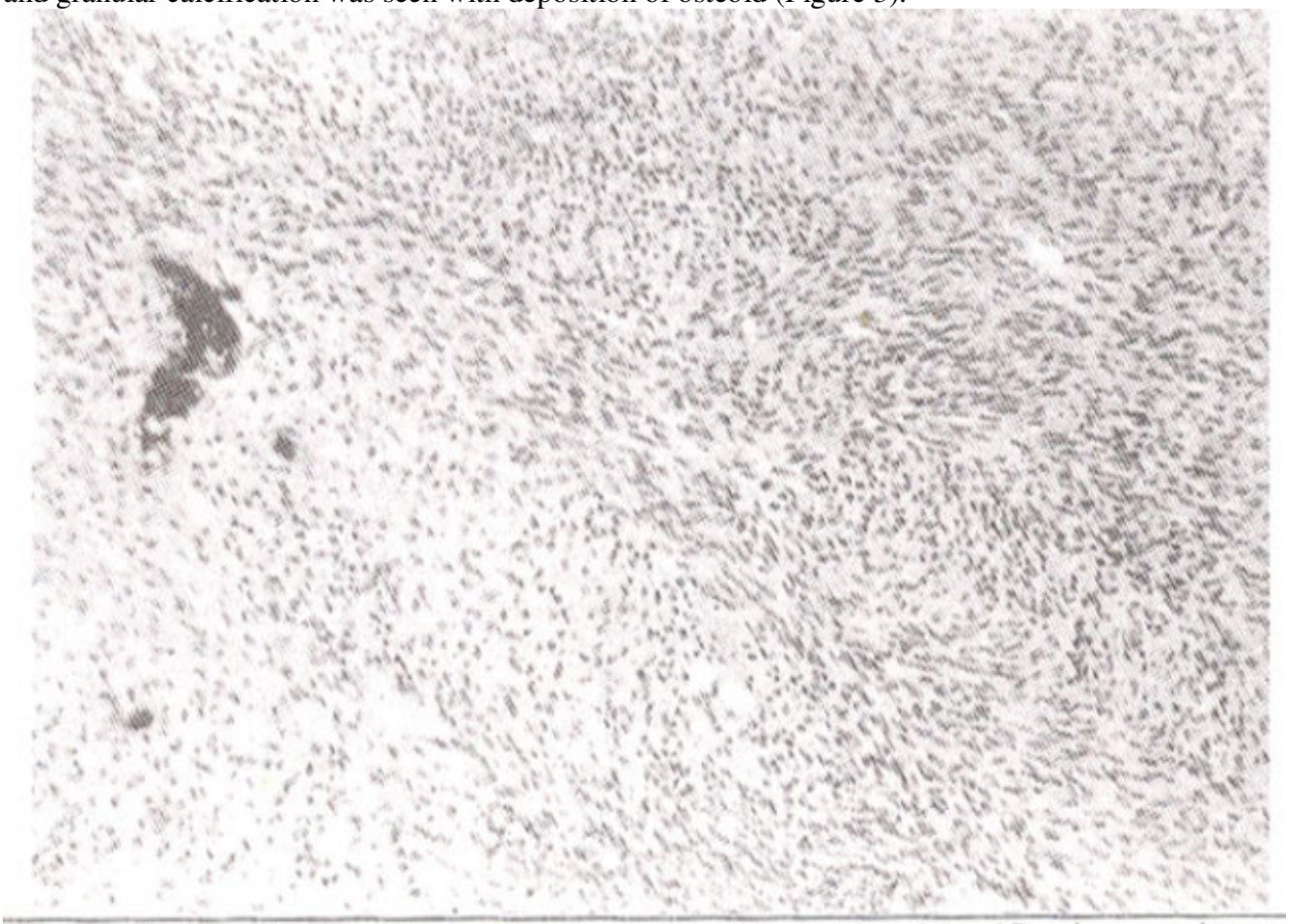

Figure 3. Fibro-cellular lesion with deposition of Osteoid and Ossification consistent with Ossifying fibroma (Mag=100X)

Differential diagnosis included ossifying fibroma and inira-nasal meningioma. To ascertain the tumour type, the sections werc stained imntuno-histochemically with monoclonal antibodies against Vimentin, Alpha smooth muscle Actin (ASMA), Epithelial membrane Antigen (EMA) and cytokeratin. This lesion only showcd reactivity to vimentin and no reactivity to other markers[13]. This is consistent with a fibrous lesion as most meningiomas show reactivity to EMA also.

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