Case Report

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Cemento Ossifying Fibroma of Maxilla: A Diagnostic Dilemma

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Abstract

An interesting case of cemento ossifying fibroma of maxilla in a 61 years old man presenting with ulcer over the left side of hard palate is discussed. The clinical features, investigations, differential diagnosis and management of cemento ossifying fibroma of maxilla is discussed.

Keywords: Cemento Ossifying Fibroma; Maxilla.

Case Summary

A 61 year old man presented to ENT OPD with complaints of pain over the left upper premolar tooth and ulcer in the left side of the hard palate for one month duration. Clinical examination revealed an ulcer over the left side of hard palate measuring about 1 x0.5 cm with irregular margins (Figure 1). The ulcer was 1 cm away from midline extending up to left upper pre molar. The margin of the ulcer was well defined edges and the floor of the ulcer showed granulation tissue. Rest ENT examination was NAD. Diagnostic nasal endoscopy showed normal study.MRI PNS (Figure 2) showed encapsulated fluid signal intensity area at the left side of hard palate with associated cortical breach of alveolar margin of the left side maxilla in the region between canine and first premolar. The differential diagnosis on MRI was osteomyelitis of hard palate with sub periosteal abscess and malignant mixed tumor of hard palate. Biopsy of the lesion showed low grade dysplasia.

All other hematological and biochemical investigations were within the normal range. Patient was advised surgical excision of the lesion. The patient underwent left upper alveolectomy (partial)(Figure 3) under general anaesthesia. The specimen was sent for histopathological examination which showed bony trabeculae in irregular shape without osteoblastic rimming surrounded by densely haphardly arranged fibrous stroma. Areas of psammomatous bodies around bony trabeculae are seen.There was no evidence of nuclear atypia,hyperchromasia or nuclear activity and the histopathological picture was suggestive of cemento ossifying fibroma of maxilla(Figure 4).

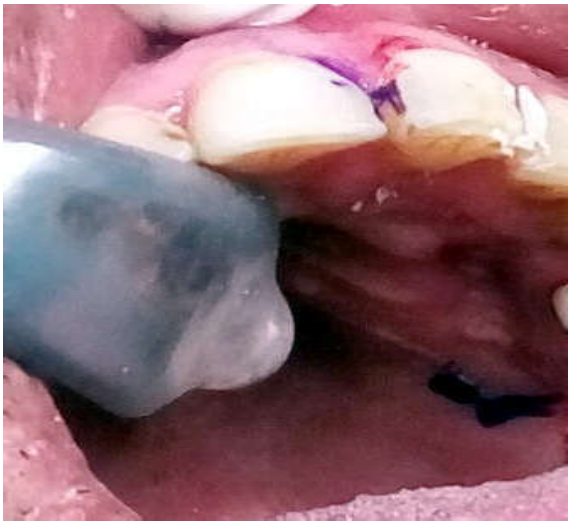

Fig. 1: Photograph of the lesion left upper alveolus

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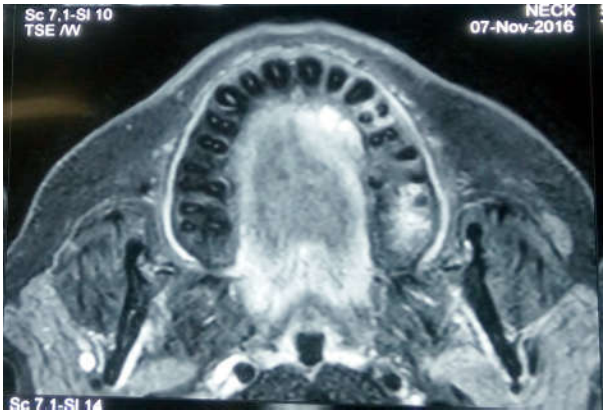

Fig. 2: MRI PNS(Axial) image of the lesion

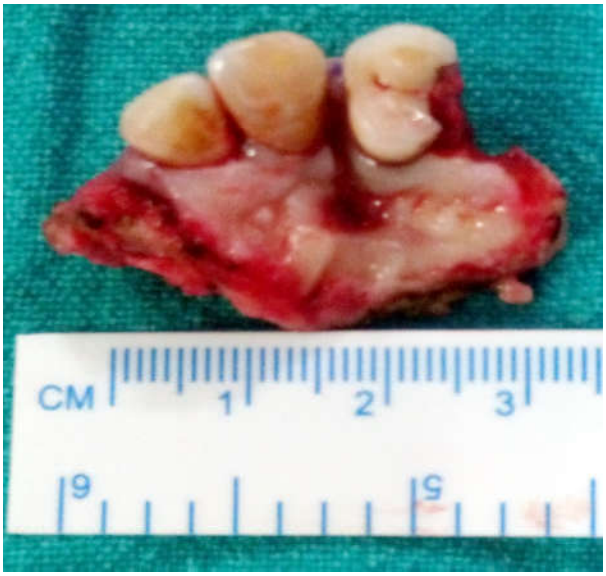

Fig. 3: Photograph of the resected specimen

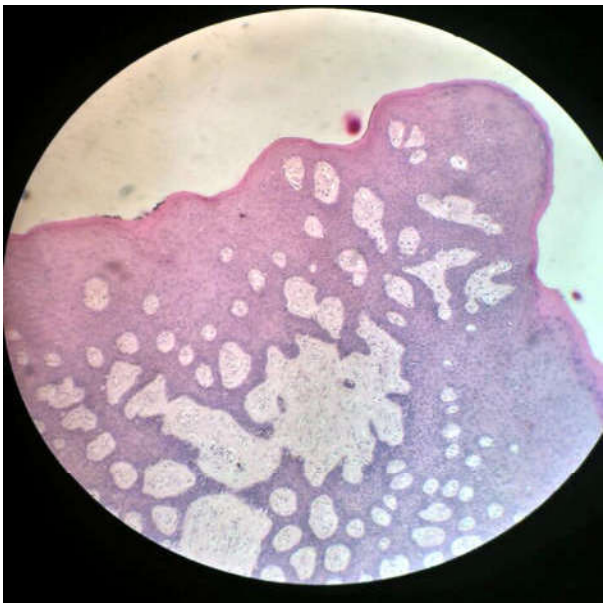

Fig. 4: Histopathological picture Haematoxylin and Eosin stain

Discussion

Ossifying fibroma forms a spectrum of fibro-osseous lesions of the jaws. They are rare, benign, non odontogenic tumors that are commonly seen in the head and neck region.

Cemento ossifying fibroma of the maxilla is an uncommon tumor. The tumor was first described by Menzel in 1872 [1] and the term ossifying fibroma was first given by Montgomery [2] in 1927 . It is considered as benign osseous tumor. Lesions with fibrous and osseous component include fibrous dysplasia (FD), ossifying fibroma (OF),cemento ossifying fibroma (COF) and cementifying fibroma(CF) [3].

According to the WHO classification [4] benign fibro-osseous lesions in the oral and maxillofacial region were divided into two categories osteogenic neoplasms and non neoplastic bone lesions. The differential diagnosis based on clinical and radiological examinations poses diagnostic challenges and only histopathological examination is confirmatory.

Ossifying fibroma is most commonly seen between the third and fourth decades of life. It's more frequent in women than men (4:1). The most common location is the mandible in 70 -90% of all cases [5]. Generally it is a slow growing tumor usually asymptomatic however the lesion can become large enough to present with facial deformity. Patients generally present with a history of painless expansion of a tooth bearing portion of the mandible. Lesions of the maxilla are less common.

Histologically these tumours are well vascularised consisting of fibrocellular tissue with capacity to form immature bone trabeculae and cementoid formations. These findings are not specific as it's seen in fibrous dysplasia as well. So a definitive diagnosis requires correlation of clinical, radiological and pathological evaluation [6].

Radiologically Cemento ossifying fibroma has different patterns based on the amount of mineralized tissue. It presents as demarcated unilocular lesion that might have a different degree of opacification. The differential diagnosis based on radiological evaluation included chondrosarcoma, osteosarcoma, fibrous dysplasia, odontogenic cysts , grolin's cyst and pindborg tumour. The well defined borders of Cementoossifying fibroma helps to differentiate from sarcoma and carcinoma. Fibrous dysplasia has a typical ground glass appearance.

The underlying cause of this condition is not known, there have been reports of past trauma in the area of lesion, postulating as a connective tissue reaction than a genuine neoplasm [7].

The treatment of ossifying fibroma is surgical with surgical options being ennucleation. curettage and radical sugery.

The recommended treatment of choice is excision of tumour including a rim of normal tissue. Management should be individualized based on size, location, benign nature and growth behavior of the lesion. In our case considering malignancy as a differential diagnosis we did a left upper alveolectomy (partial) under general anaesthesia.

Conclusion

The diagnosis of cemento ossifying fibroma can pose a diagnostic dilemma. The diagnosis should be carefully considered after ruling out malignancy. Imaging and histopathological examination play a crucial role in establishing the diagnosis.

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