Plexiform Ameloblastoma: A Case Report

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ABSTRACT : Ameloblastoma is an aggressive tumour that originates from epithelial tissue in the oral cavity. It most commonly occurs in third to fifth decade & with equal sex predilection. It predominantly occurs in mandibular molar- ramus area. In present case report, a case of unusually large plexiform ameloblastoma in mandibular anterior region is presented with its clinical, radiological, histological features.

Key words: Ameloblastoma, Anterior mandibular region, odontogenic tumour, Plexiform

INTRODUCTION

WHO(1992)defines ameloblastoma as "a benign but locally aggressive tumour with high tendency to recur, consisting of proliferating odontogenic epithelium lying in a fibrous stroma"[1]. It accounts for about 1% of all oral tumours& 13-58% of all odontogenic tumours[2]. It is an aggressive neoplasm that originates from remnants of the dental lamina, epithelium of odontogenic cyst, basal cells of the surface epithelium of the jaws, heterotopic epithelium in other parts of body especially pituitary gland[3,4].Ameloblastoma is classified into four types: solid/multicystic, extraosseous/peripheral, desmoplastic & unicystic. The latest WHO Classification of head & neck tumours (2017) categorizes ameloblastoma into three types: conventional, unicystic & peripheral[2].Six histological subtypes of ameloblastoma have long been identified and comprise the following 1. Follicular 2.Plexiform 3.Acanthomatous 4.Granular 5.Basal cell and 6.Desmoplastic type[5].

CASE PRESENTATION

A 35-year-old male patient reported to the department with a chief complaint of swelling in lower anterior region of the jaw. The swelling was first noticed 6 months back after he met with an accident. It gradually increased in size to reach the present size. The patient gave history of intermittent pain & discomfort during speech and mastication due to swelling. Intraoral examination revealed pinkish red coloured tender swelling seen in the lower labial vestibule with restricted tongue movement. It extended antero-posteriorly in relation to distal aspect of 42 to distal aspect of 32 and supero-inferiorly from marginal gingiva to the labial vestibule as seen in figure.1

On palpation all inspectory findings were confirmed, the irregular pinkish red soft swelling was 3x2 cm in size and was tender on palpation.

Panoramic radiography showed well circumscribed unilocular radiolucency in anterior mandible crossing the midline in relation to 32,31,41,42,43,44. The differential diagnoses of odontogenic keratocyst, aneurysmal bone cyst, giant cell tumour and fibrosarcoma were considered.

Figure 1

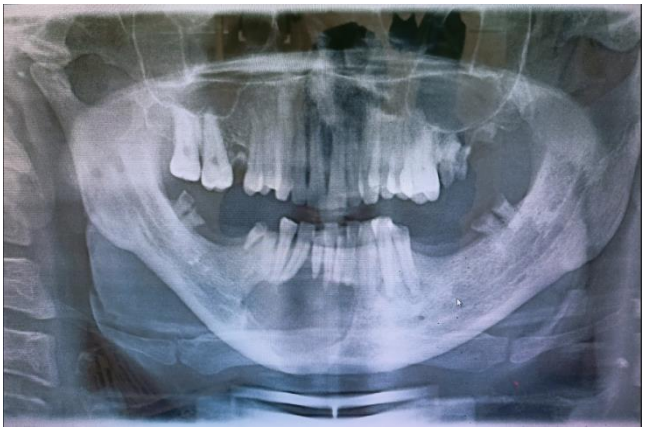

Figure 2 OPG

HISTOPATHOLOGY

On gross examination of given sample it showed three bits of tissue, colour of tissue was blackish brown, rough in texture and soft in consistency. The smallest one measured about 1.2x 1.3cm and largest one was 1cm x 1.5cm in size respectively as seen in figure. (3).

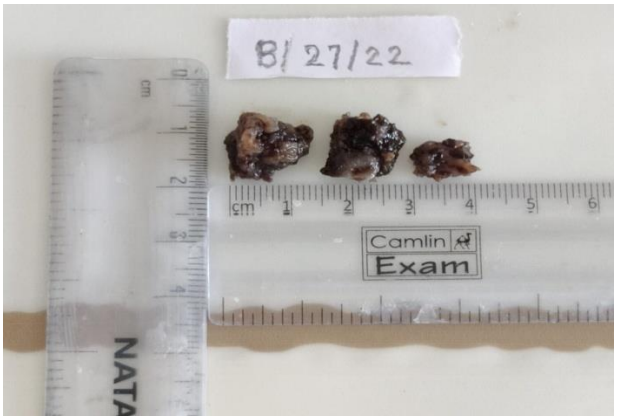

Figure 3. Grossing of tissue

On microscopic examination, a network of interconnecting strands of cells. The strands were bound by layer of cuboidal to columnar cells resembling ameloblasts with hyperchromatic nuclei showing reversal of polarity and between these layers star shaped cells resembling stellate reticulum are seen as shown in figure(4,5).At some places cells with abundant cytoplasm and centrally placed nucleus showing squamous metaplasia within plexiformatous strands was seen as shown in figure(6,7).Reddish brown coloured areas of haemorrhage are seen and peripheral bony trabeculae were evident at certain places.

Overall histological features are suggestive of **plexiform ameloblastoma.**

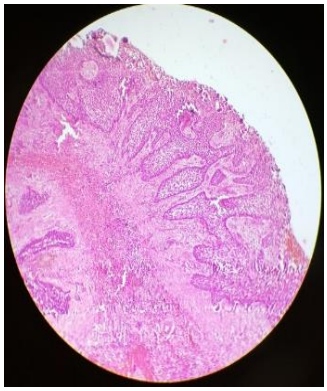

Figure 4. (10x)

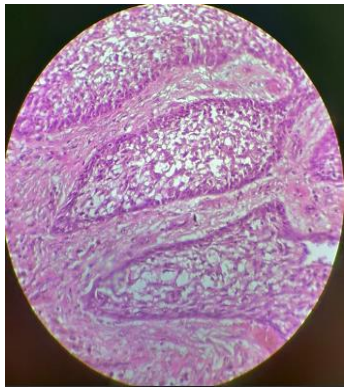

Figure 5.(40x)

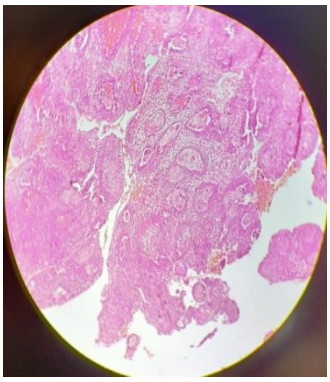

Figure 6. (10x)

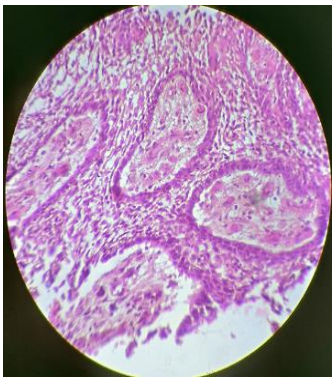

Figure 7. (40x)

DISCUSSION

Ameloblastoma is one of the tumours with well known tendency to recur. Radiographically the lesions show thinning of cortex in buccolingual plane and are expansile. The lesion is classically multilocular with soap bubble or honeycomb pattern and rarely unilocular. In case reports by Varkhede et.al[3], Hasan K et al[1], they observed multilocular radiolucency but in present case we found unilocular radiolucency.

It is the most prevalent odontogenic tumour, although making up only 1% of all jaw cysts and tumors[3]. Most commonly it is observed in mandible (80% of ameloblastoma), in that there is predilection in molar ramus area (70%) followed by premolar region (20%) and 10% in anterior region[4]. In present case report we observed lesion in mandibular anterior region which is contradictory to study of Chauhan D et.al[8],Varkhede A[3].

C Ogunsalu et.al[5] analysed 19 cases of ameloblastoma and found slight predilection in males (M: F=1.1:1). According to WHO classification of head and neck tumours It exhibits no gender predilection and occurs over a wide age range[6]. In present case the patient is 35yrs male.

There are many histological patterns of ameloblastoma among that follicular is the most common one followed by plexiform, desmoplastic & acanthomatous variety. In many cases several histological patterns present within same lesion while in some cases only one histological pattern present[4].

According to Robinson ameloblastoma is unicentric, nonfunctional, intermittent in growth anatomically benign and clinically persistent tumour. It mainly expand the bone rather than perforation hence patients allow ameloblastoma to be untreated for several years though the expansion occur it does not break through bone[7]. In present case the lesion was present since 6 months which was gradually expanding.

Treatment of ameloblastoma varies from conservative approach to radical resection. The different treatment choices include enucleation followed by chemical cauterisation with carnoy's solution, marsupialisation followed by enucleation, marginal resection or aggressive resection[1]. In present case we performed enucleation followed by chemical cauterisation with carnoy's solution.

CONCLUSION :

The clinical differential diagnostic consideration for anterior unilocular lesions includes cysts and other neoplasms. So, the chances of treating lesion conservatively ultimately increases the chances of recurrence of tumour. Therefore, it is essential to emphasize the importance of clinico-radiological and pathological correlation of lesions to arrive at appropriate diagnosis.

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