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CASE REPORT

A MASSIVE CYST IN THE MAXILLA – A DIAGNOSTIC DILEMMA

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Abstract

Inflammatory jaw cysts comprise a group of lesions that arise as a result of epithelial proliferation. Radicular cysts are the most common inflammatory cysts of the oral cavity. These cysts rarely cross the midline which possess diagnostic dilemma to a clinician, clinically as well as radiographically. The present case showed a massive cyst in the maxilla crossing the midline which was evident on radiographic examination but barely noticeable clinically.

KEY WORDS: RADICULAR CYST, MAXILLA, MASSIVE CYST.

INTRODUCTION

Correct treatment begins with correct diagnosis. Arriving at a correct diagnosis requires knowledge, skill and art. One lesion mimicking the other poses the diagnostic dilemma. Odontogenic cysts are the most common jaw lesions in oral and maxillofacial region. They are broadly divided into developmental and inflammatory based on their etiology. Among the inflammatory type, radicular cysts comprise about 52-68% of all cysts affecting the jaws and 42-44% occurring at the apical region of tooth.[1,2] They are usually an incidental finding on radiograph, but rarely grow to extend entire maxilla.[3] Most radicular cysts are small in size ranging from 0.5 to 1.5cm, but they can even exceed five centimeters.[4] This paper describes a very unusual presentation of radicular cyst in the maxilla of size approximately 6.5x 3.0 cms crossing the midline.

CASE REPORT:

A 23 year old female patient reported to the Department of Oral Medicine and Radiology, College of Dental Sciences, Davangere with the chief complaint of swelling over the right side of

the face since 6 months which was sudden in onset. Initially it was smaller in size and gradually increased to the present size without any regression. It was not associated with any pain. No history of bleeding/ discharge from the nose. No history of trauma.

Clinical examination revealed a solitary smooth surface swelling in the middle third of the right side of the face approximately 1cms x 1.5cms, roughly oval in shape with the obliteration of nasolabial fold. No local rise in temperature, non – tender, hard in consistency and fixed to underlying structures and skin over the swelling was pinchable.(Fig.1)

Intraoral examination revealed a solitary swelling present in the right buccal vestibule of size approximately 2cms x 0.5cms extending from the distal surface of canine to the distal surface of the 1st molar which was hard in consistency except in the region of 14 where it was fluctuant. Buccal cortical plate expansion was evident i.r.t 15, 16. (Fig.1) Hard tissue examination revealed dental caries with pulpal involvement i.r.t 17, 18 which was tender on percussion and none of the involved teeth were mobile. Electrical pulp testing was done in i.r.t 17 to 23 showed a delayed response i.r.t 17, 12.

Based on a detailed history, careful clinical examination, provisional diagnosis of radicular cyst i.r.t 17, 18 was considered with the differential diagnosis of Keratocystic Odontogenic Tumor, Unicystic ameloblastoma, Central giant cell granuloma, Adenomatoid Odontogenic Tumor.

Considering the extensive nature of the lesion, apart from the regular intraoral periapical, occlusal, panoramic and paranasal sinus radiographs, Computed Tomography scans of the facial bones were made. On radiographic examination, a well defined radiolucency of size approximately 6.5x 3.0 cms extending from 18 to 22 with well corticated borders along with mesially displaced 14 and distally displaced 15, 22. Distobuccal root resorption was evident i.r.t 16.(Fig.2) CT scan revealed a cystic lesion of size 3.2x 4.1cms in the maxillary alveolar arch with thinning of the cortical bone at the superior pole of the cyst without any evidence of cortical breakthrough and was seen to bulge into the right maxillary sinus.(Fig.3) Fine Needle Aspiration Cytology revealed a few cholesterol clefts and few inflammatory cells suggestive of inflammatory cyst. Consequently, an incisional biopsy was taken from bone overlying cyst i.r.t right maxillary buccal vestibule and cystic lining in right maxillary buccal vestibule, which revealed stratified squamous epithelium of 3-4 cells thicker and connective tissue was fibro cellular in nature with numerous chronic inflammatory cells, suggestive of radicular cyst.

Following clinical, radiologic and histopathologic examination, the lesion was diagnosed as a radicular cyst, and treatment plan was formulated. All involved teeth from 17 to 23 were endodontically treated along with the extraction of 18, 28. Enucleation of the cystic lesion in toto was performed by giving crevicular incision from 17 to 24 with the releasing incision in the region of 24, mucoperiosteal flap was elevated and cystic lesion was curetted completely and Carnoy's solution was applied to the cystic cavity for chemical curettage. Then cystic cavity was irrigated with betadine, saline and hydrogen peroxide and sutures were placed. Excised tissue was sent for histopathological examination which confirmed the diagnosis of radicular cyst (Fig.4). Following 15 months postoperative period healing was satisfactory.

Figure 1: Photographs showing Extra – oral and Intra – oral swelling.

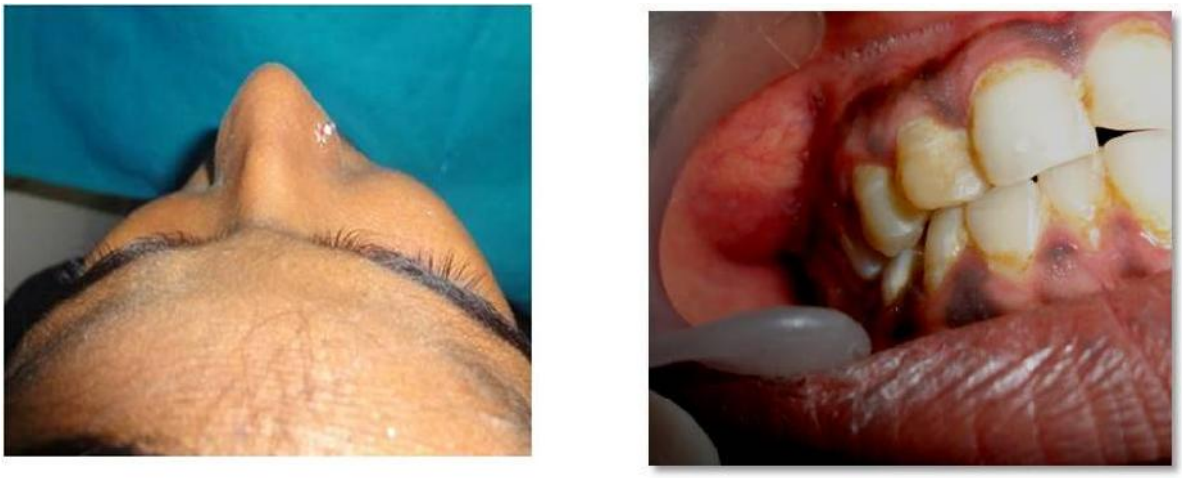


Figure 2: Panoramic radiograph reveals a well defined radiolucency of size approximately 6.5x 3.0 cms extending from 18 to 22 with well corticated borders.

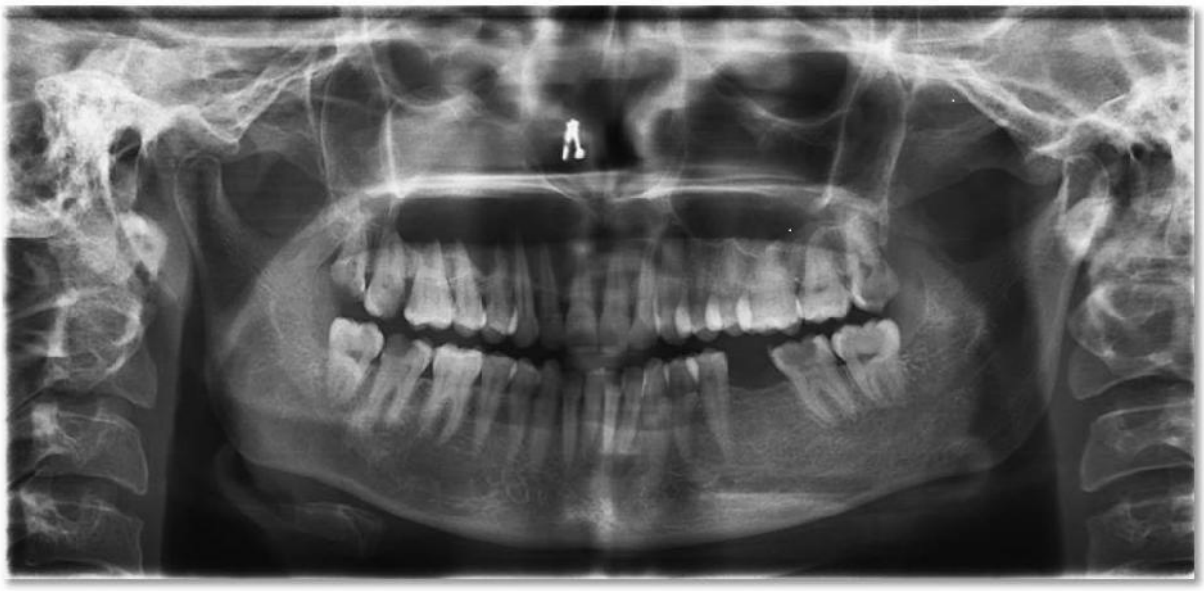


Figure 3: Computed Tomography scan images of the cystic lesion.

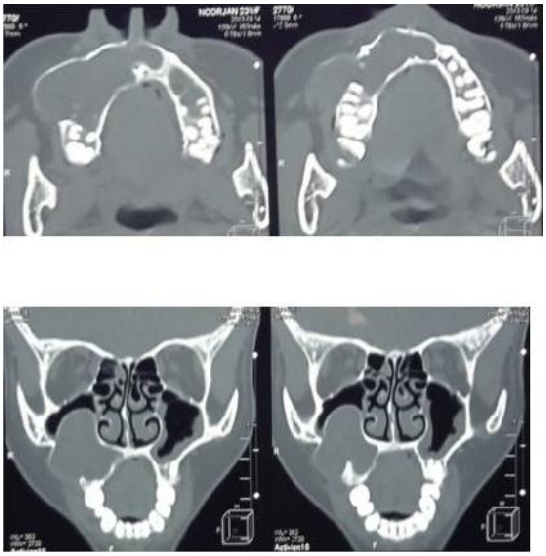
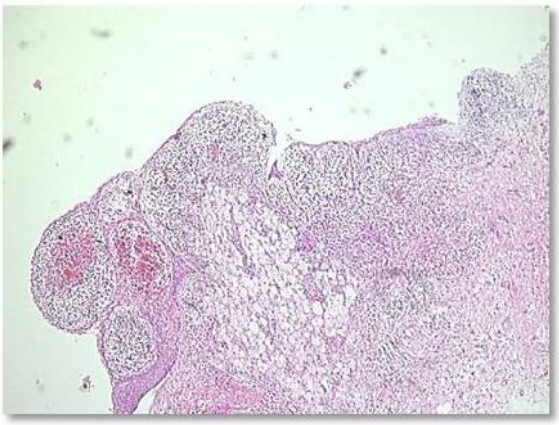


Figure 4: 20X microphotograph showing arcading pattern of proliferating epithelium.



DISCUSSION:

Odontogenic cysts constitute frequent benign lesions of the jaw bones and are due to the ubiquous presence of epithelial rests after odontogenesis.[5] Among the odontogenic cysts radicular cyst is the commonest one which occurs in the periapical region of any teeth, at any age but seldom seen associated with the primary dentition. Results of the previous studies have shown that radicular cysts occur more commonly between the third and fifth decades of life, more common in males than females, and more frequently found in the anterior maxilla than other parts of the mouth.[6] In contrast to this, our case showed radicular cyst in the female patient

in 2nd decade of life which was in the posterior region of maxilla extending upto the anterior region. The radicular cyst is usually symptomless and detected incidentally on radiographs. However, as some of them grow, they can cause mobility and displacement of teeth and once infected, lead to pain and swelling, after which the patient usually becomes aware of the problem. The swelling is slowly enlarging and initially bony hard to palpate which later becomes fluctuant.[7] The present case also showed a swelling of bony hard consistency with fluctuancy in the region of premolar which indicates that loss of cortical plate. The classic description of the radiological appearance of radicular cysts is that uniform round or ovoid radiolucencies surrounded by a narrow radiopaque margin[4] of size ranging from 0.5 to 1.5cm, but they can even exceed five centimeters.[8] But the present case showed a non - uniform radiolucency of size approximately 6.5 x 3.0 cms extending posterior to the distal root of right 3rd molar extending anteriorly upto to the distal root of left lateral incisor with the well corticated border along with displacement and resorption of apices of teeth. In the present case, 12 was non- vital, there is a chance of two cysts occurring individually which might have merged into a single larger one, but when surgically exposed it was not the case, it was the single cyst which extended from the posterior to the anterior region of maxilla.

Till now in the literature there are no reported cases of radicular cyst in the maxilla crossing the midline, but there are reported cases of bilateral radicular cysts. This is a unique case of massive radicular cyst in the maxilla presented in a young female.

CONCLUSION:

It is imperative that careful clinical examination along with the appropriate radiographic interpretation guides an oral physician to arrive at correct diagnosis to provide prompt treatment, thereby minimizing the morbidity and mortality of the patients.

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