Globulomaxillary non- odontogenic cyst: A case report

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Abstract

Globulomaxillary cyst is an uncommon cyst and was considered to be an inclusion or developmental cyst that arises from entrapped nonodontogenic epithelium in the globulomaxillary suture. Subsequently, it was admitted as a fissural cyst secondary to the proliferation of entrapped epithelium between the globular part of the medial nasal and maxillary processes. Because of deficiency of evidence to back up the theory of embryonic epithelial entrapment in the situation, most authors dispute the presence of the lesion despite attempts to reclassify it as a fissural cyst. The authors report a case of a Globulomaxillary cyst in a 25-year-old female presented with a maxillary swelling and discuss the clinical and histopathological features of an uncommon globulomaxillary cyst in patient treated successfully by surgical excision.

Keywords: Fissural cyst, Maxilla, Non-odontogenic.

Introduction

The globulomaxillary cyst is a cyst that appears between a maxillary lateral incisor and the adjacent canine demonstrates itself as an "inverted pear-shaped radiolucency" in maxillary anterior radiographs. The globulomaxillary cyst often causes the roots of adjacent teeth to diverge. The globulomaxillary cyst was seen to be an inclusion or developmental a cyst that arises from entrapped non-odontogenic epithelium the globulomaxillary suture. The growth of the anterior maxilla was attributed to the merging of growth centers rather than a fusion of facial processes, and hence ectodermal entrapment was ruled out. Because of deficiency of evidence to back up the theory of embryonic epithelial entrapment on this site, most authors dispute the presence of the lesion despite attempts to reclassify it as a fissural cyst.[(1)] Embedded in the literature for years, this lesion was included in the 1971 WHO classification of histologic typing of odontogenic tumors but removed in the second edition in 1992. Recently, it has been admitted as a fissural cyst secondary to the proliferation of entrapped epithelium between the globular part of the medial nasal and maxillary processes.[(1-4)]

Case Report

A 25-year-old female patient reported with a swelling in relation to the upper right region of the jaw since 2 months. No history of trauma was recorded. Medical and dental history too was found to be insignificant. Extra oral examination revealed a localized swelling in relation to middle 1/3rd of the face, in between 12,13. The swelling was soft, fluctuant in consistency and tender on palpation. There is perforation of the overlying buccal cortical plate. The overlying skin colour and surface temperature was normal. On an intra oral examination a well-defined swelling, 1x1 cm in size, in relation to 12, 13 the region, with the expansion of the labial cortex and obliteration of the vestibule was ruled out.

Pulp vitality test in relation to 11, 12, 13, 14 revealed that the teeth were vital. OPG radiograph in relation to maxillary anterior region revealed a unilocular inverted pear shaped radiolucency, 2x3 cm in size in the region of 12 & 13, with corticated margins, extending superoinferiorly from alveolar to floor of nasal fossa and anteroposteriorly from mesial of apical 1/3 of 12 to distal of 13 with loss of lamina dura and with slight displacement of roots of 12 &13.

Fig. 1: Preoperative OPG

Fig. 2: Intra Oral examination

Clinical differential diagnosis of globulomaxillary cyst included odontogenic keratocyst (OKC) and adenomatoid odontogenic tumor (AOT). An exploratory biopsy revealed cystic lumen lined by pseudo stratified columnar epithelium with numerous mucous cells, thus confirming the diagnosis of Globulomaxillary cyst.

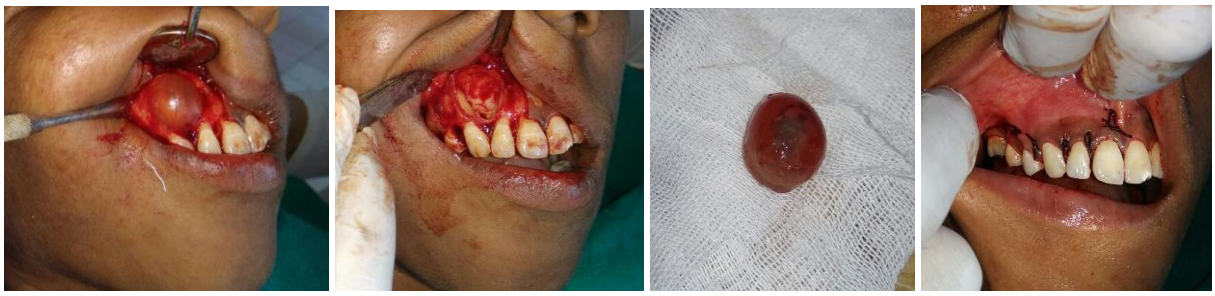

Fig. 3: Surgical procedure done

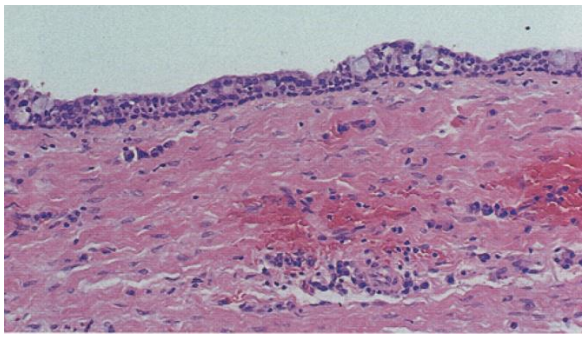

Fig. 4: Histopathological examination

Discussion

The globulomaxillary cyst was classically thought to be an inclusion or developmental

cyst that arises from entrapped non odontogenic epithelium in the globulomaxillary suture.[4] Subsequently, the existence and histogenesis of this lesion has been disputed stating that the evidence showed that facial processes per se did not exist. The development of the anterior maxilla was attributed to the merging of growth centers rather than fusion of the facial processes, and hence ectodermal entrapment was ruled out. Recent embryology studies, nevertheless, have demonstrated that Christ's view of facial development was incorrect.[5] Fusion of facial processes does occur, and the epithelium is entrapped in areas that later will lie between the maxillary lateral incisors and canines. This review argues that embryologically and histopathologically, globulomaxillary cyst should again be believed as an identifiable clinicopathologic entity.[2] On the basis of the foregoing facts, an etiological relationship between the cysts and clefts is rather unlikely, although several authors allege that such a relationship exists. The very rare cases in which a globulomaxillary cyst formed on one side and a cleft formed on the other refer to some relationship of this kind. Presuming that the fusion is not where these cysts develop, the question may arise as to whether they originate from embryonic epithelial remnants at all. Robinson[6] holds the thought that embryonic epithelial remnants cannot exist in the sutures and that the cysts originate in the primordium of supernumerary teeth.

Conclusion

A broad variety of lesions presenting clinically and radiographically as globulomaxillary cysts have been set up to be Naso alveolar cysts, adenomatoid odontogenic tumors, odontogenic keratocyst, palatal clefts and radicular cysts. To elucidate the etiology of globulomaxillary cysts, further investigations are needed.

References

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