

CALCIFYING EPITHELIAL ODONTOGENIC CYST OF THE MAXILLA : A CASE REPORT

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Introduction

The calcifying odontogenic cyst is a histopathologically, radiographically & clinically unique, specific cyst with a less recurrence potential compared to other odontogenic cysts such as the odontogenic keratocyst or the dentigerous cyst. It generally can occur at any age but is more common in teenage years. It has a marked predilection for females & for occurrences in maxilla. In the early stages the Calcifying epithelial odontogenic cyst is discovered as an accidental radiographic finding. Radiographically in their early stages they will appear as a complete radiolucent lesion, but as they mature they develop calcifications that produce well circumscribed radiolucent-radiopaque appearance. The cyst creates cortical expansion but is otherwise asymptomatic. Average size generally varies from 2-8 cm.

This report describes a case of Calcifying Epithelial Odontogenic Cyst of the Maxilla in an 8 year old girl who was treated successfully with enucleation & primary closure.

Report of a Case

A 8 year old girl was referred to us with complaints of swelling over the right side of mid face since last 4-5 months. The swelling was slowly growing, painless & had gradually increased to attain its present size. Her mother gave a history of previous aspiration from the swelling 1 month back from dental surgeon which revealed fluid. Extra oral examination revealed the swelling was about 5 x 4 cm in the right cheek area, starting from the nasolabial fold superiorly to the upper lip inferiorly. On palpation it was firm & intraorally showed expansion of the labial cortical plate. On aspiration from the lesion a dark pale coloured liquid was aspirated along with some blood. Patient was advised an orthopantograph which revealed a well defined radiolucent lesion with specks of radio opacity in the centre. Based on the clinical & the radiological findings a diagnosis of calcifying odontogenic epithelial cyst was made.



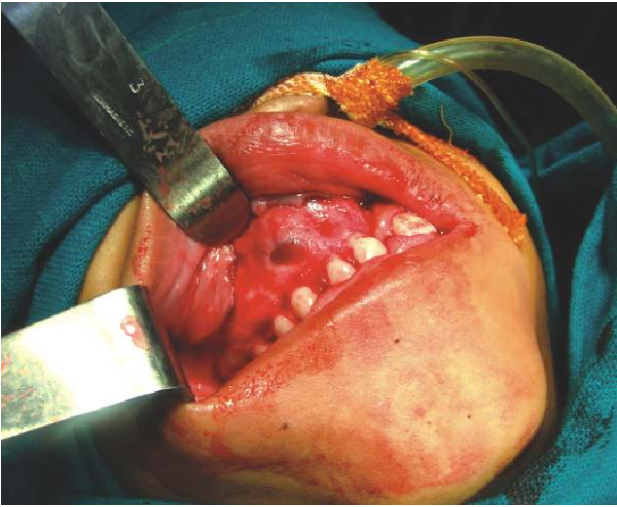
Pre op. Picture:- Note the swelling causing asymmetry of the upper lip & obliterating the nasolabial fold.



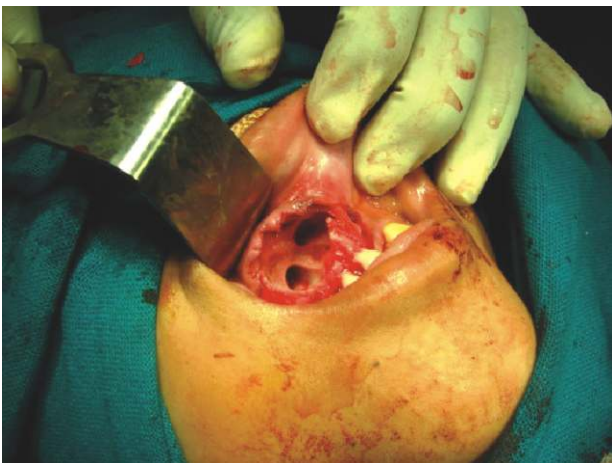
Pre op. OPG:- Radiograph showing well defined radiolucency in the anterior maxilla with specks of radiopacities in centre

The patient was posted for enucleation of the cystic lesion under general anaesthesia, where standard naso endotracheal intubation was carried out. After scrubbing & draping an intraoral trapezoidal incision was taken & flap was reflected. Considerable amount of expansion of labial cortical plate was appreciated. The lining of lesion was carefully separated & enucleated along with flecks of hard calcified odontogenic tissue, both sent for histopathological examination. The permanent upper central & lateral incisors which were also entrapped in the lesion had to be removed along with the cystic lining. The

patient was extubated out uneventfully & she recovered well postoperatively.



IntraOp. View:- Flap reflected, lesion exposed. Expansion of labial cortex can be well appreciated



IntraOp. View:- Lesion enucleated, sockets of the extracted teeth can be seen in the enucleated site.

The Microscopic examination of the lesion showed a cystic lesion lined by odontogenic epithelium exhibiting focal aggregates containing ghost cells with presence of calcific deposits. Focal stellate like reticulum was also appreciated. Densely eosinophilic, acellular masses are present adjacent to the epithelium. On the basis of microscopic picture a diagnosis of Calcifying Epithelial Odontogenic Cyst was made.

The patient followed up for almost a year with no evidence of recurrence or any other complain.



One month Post Op Picture

Discussion

Calcifying odontogenic epithelial cyst is usually a unilocular lesion with much less aggressive behaviour. Because calcifying odontogenic cysts have three possible clinical-radiographic presentations, there are three differential lists. When a Calcifying Epithelial Odontogenic cyst presents as a unilocular radiolucency unassociated with calcifications or an impacted tooth, it will suggest an odontogenic keratocyst, an ameloblastoma an adenomatoid odontogenic cyst if it is in the anterior jaws, or an ameloblastic fibroma. When it presents as a mixed radiolucency-radiopaque lesion, all of these except the adenomatoid odontogenic cyst become inappropriate because they do not produce a calcified product. In addition a developing odontoma & a ossifying fibroma also appear. A characteristic finding of this cyst in histopathologic examination is the presence of **ghost cells**. An odontoma is seen with some frequency in conjunction with these cysts. An earlier designation for the calcifying odontogenic cyst was calcifying & keratinizing odontogenic cyst; because the keratinisation is often quite extensive & calcification less prominent, this may actually be a more accurate description.

Conclusion

Calcifying Epithelial Odontogenic Cyst have limited biologic behaviour, Proper enucleation of these lesion makes sure that they do not reoccur, However a detailed history supported with adequate radiographic & histopathologic measures is imperative for differential diagnosis & treatment of these lesions.

References

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- Marx & Stern: Oral & Maxillofacial Pathology