

KNOW YOUR FIELD

Histomorphological array in odontogenic keratocyst

Mohsin Gadiwan, Paremala K, Soumya M, Sreelatha S Hosthor

Department of Oral Pathology, Krishnadevaraya College of Dental Sciences, Bangalore, Karnataka, India

CASE REPORT

A 26-year-old female patient presented with a chief complaint of a swelling on the left lower third of face since 25 days and gives a history of extraction in relation to 38 tooth 20 days back. On extra oral examination, the swelling was diffuse, oval, soft, edematous and was fixed to underlying tissues. A solitary submandibular lymph node was palpable which was mobile, firm and tender. Intraoral examination revealed a non-healing socket with granulation tissue, pus discharge and denuded bone in relation to 38 and 37 was missing.

Orthopantomograph showed a radiolucent lesion with sclerotic and scalloping border involving left body of the mandible extending from lower first premolar to one half of the ramus with intact lower border. Occlusal film revealed perforation of lingual cortical plate.

A provisional diagnosis of dentigerous cyst was made.

Microscopically, a cystic lining was present which was composed of uniform 6-10 cells thick layer of epithelium, with little or no evidence of rete ridges [Figure 1]. A well-defined palisading columnar basal cell layer with a corrugated parakeratinizing luminal surface along with keratin flakes in the cystic lumen was evident. Few areas showed epithelial hyperplasia. Epithelial proliferation was seen in the form of papillary projections into the cystic lumen as well as epithelial in foldings into connective tissue wall [Figures 2-4].

In the presence of inflammation, the typical cystic epithelium had lost its keratinized surface and developed rete processes. A dense chronic inflammatory cell infiltrate, numerous cholesterol clefts and giant cells could be appreciated in the stroma along with areas of reactive bone formation. [Figures 5-7].

Although giant cells and epitheloid macrophages are commonly seen in inflammatory cysts simulating host immune response, their presence in such large numbers and

surrounded by numerous cholesterol clefts as seen in our case, is a remarkable feature to come across [Figure 8].

FINAL DIAGNOSIS

Odontogenic keratocyst (OKC) with secondary inflammation.

Differential diagnosis:

1. Inflammatory variant of dentigerous cyst
2. Radicular cyst

Inflammatory variant of dentigerous cyst

Dentigerous cyst is the most common type of developmental odontogenic cyst with typical histological features and

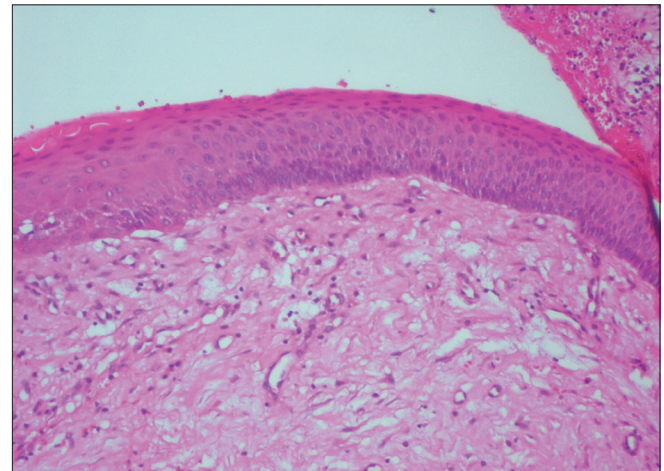


Figure 1: H and E section showing cystic lumen lined by parakeratinized stratified squamous epithelium. $\times 100$

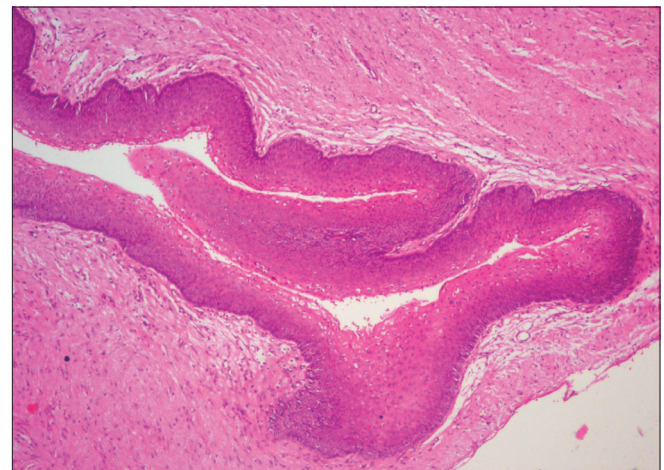


Figure 2: H and E section showing papillary projections into cystic lumen $\times 100$

Access this article online

Quick Response Code:



Website:

www.jomfp.in

DOI:

10.4103/0973-029X.110724

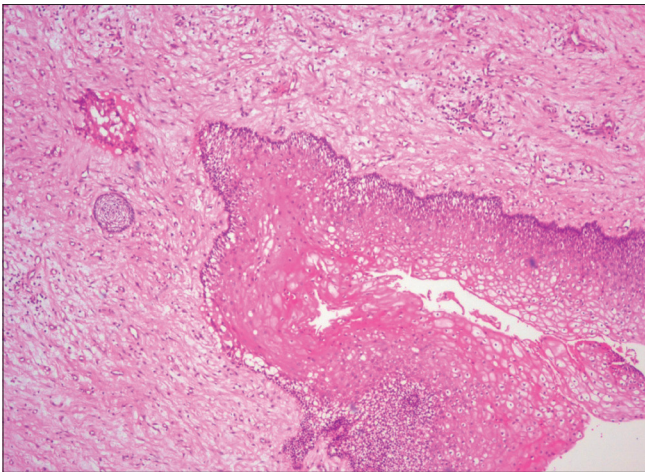


Figure 3: H and E section showing odontogenic island, ×100

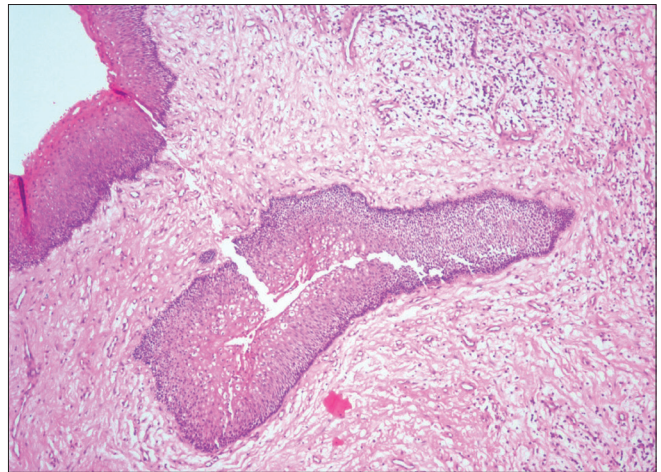


Figure 4: H and E section showing satellite cyst in the cystic wall. ×100

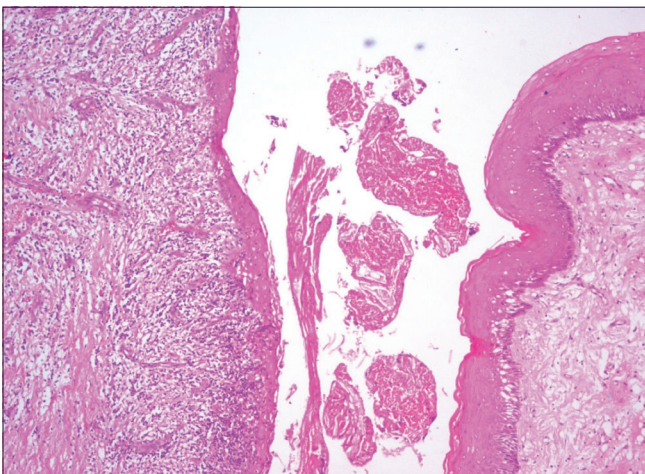


Figure 5: H and E section showing both inflammatory and classic OKC lining in same field. ×100

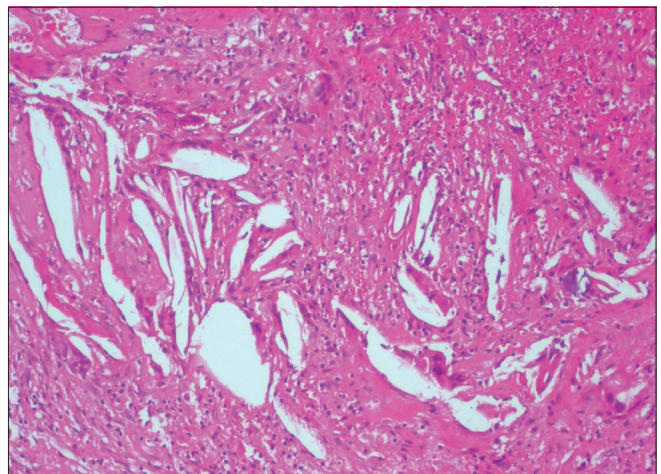


Figure 6: H and E section showing cholesterol clefts with few giant cells. ×200

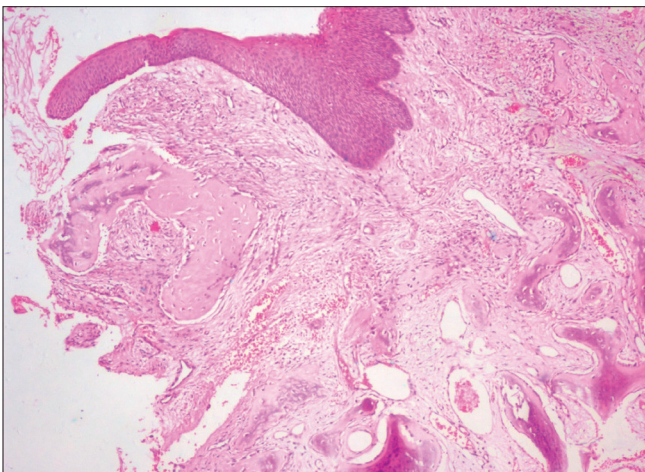


Figure 7: H and E section showing reactive bone formation in CT wall. ×40

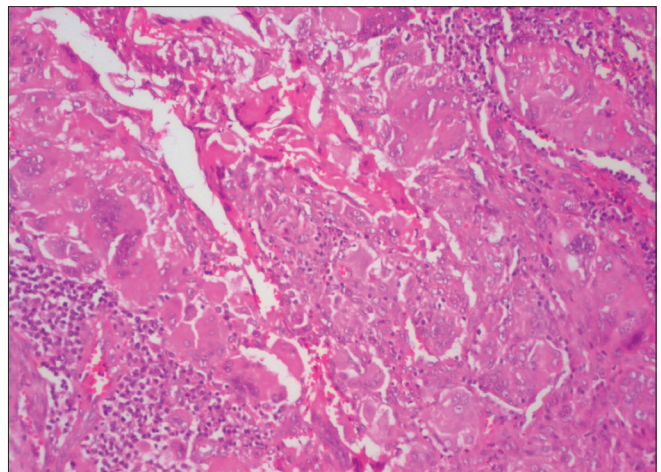


Figure 8: H and E section showing clusters of multinucleated giant cells. ×400

presents as a unilocular radiolucency with sclerotic border attached to cemento-enamel junction of the involved tooth.

Typically, it is lined by non-keratinized 2-4 cell thick epithelium resembling reduced enamel epithelium. With secondary inflammation epithelial lining may show varying

amounts of hyperplasia and may develop rete ridges with keratinization.

In our case, the cyst lining was not attached to cemento-enamel junction of the tooth and had no conventional histopathological features similar to dentigerous cyst.

Periapical cyst

Periapical cyst is usually associated with non-vital teeth and is usually asymptomatic; radiographically, round to ovoid radiolucency ranging few millimeters to centimeters in diameter with a narrow opaque margin contiguous with the

involved tooth can be seen.

Non-keratinized stratified squamous epithelium of inconsistent thickness with diffuse inflammatory infiltrate in connective tissue stroma is seen conventionally.

We excluded this lesion due the absence of carious/non-vital tooth in its association.

How to cite this article: Gadiwan M, Paremala K, Soumya M, Hoshor SS. Histomorphological array in odontogenic keratocyst. *J Oral Maxillofac Pathol* 2013;17:143-5.

Source of Support: Nil. **Conflict of Interest:** None declared.