

# Glandular Odontogenic Cyst of Mandible: A Rare Entity

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## ABSTRACT

Glandular odontogenic cyst (GOC) is a rare developmental odontogenic cyst. It is a slow growing and asymptomatic swelling, usually affecting middle aged men and has tendency to reoccur. Here, we report a case of GOC in the anterior portion of mandible diagnosed by histopathology.

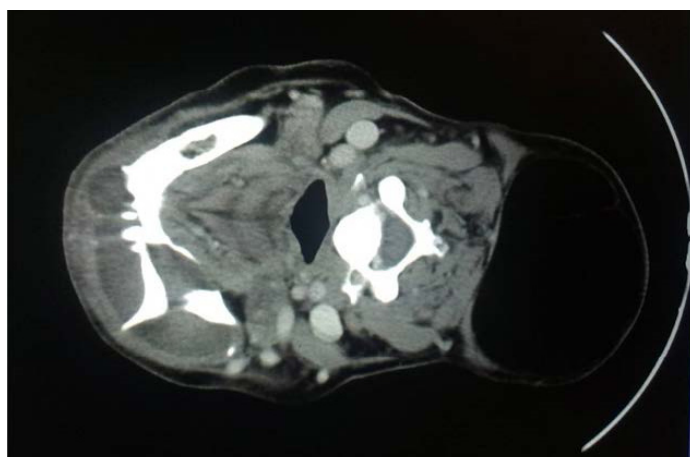
## CASE REPORT

A 17-year-old female presented with a history of pain and swelling in the right mandibular region of 5 year duration. On examination, tender facial swelling measuring 4x6x3 cm was noted. It was associated with bleeding gums and foul smelling discharge. Panoramic view radiograph showed a well defined radiolucency, with irregular margins in the mandible [Table/Fig-1]. A well-defined multilocular radiolucent lesion in the region of anterior portion of the mandible was appreciated on CT scan [Table/Fig-2]. She underwent hemimandibulectomy with clinico-radiological suspicion of ameloblastoma.

Grossly external surface was unremarkable and on cut section a cystic cavity was identified in the mandible. Histology revealed fragments of cyst wall lined by stratified squamous epithelium of

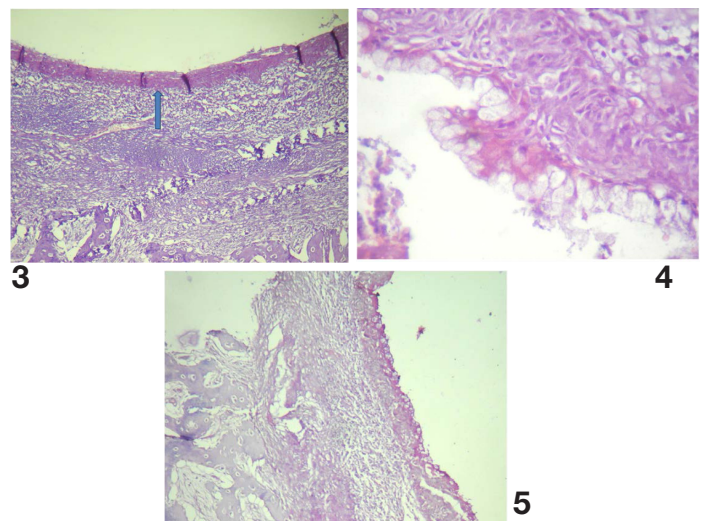


[Table/Fig-1]: Panoramic radiograph showing large multilocular radiolucency



[Table/Fig-2]: CT section showing well defined multilocular lesion in the anterior portion of mandible

**Keywords:** Developmental cysts, Jaw cysts, Tumour



[Table/Fig-3]: Cyst cavity lined by stratified squamous epithelium (arrow) (H&E 100X)  
 [Table/Fig-4]: Squamous epithelial lining with numerous goblet cells (H&E 400X)  
 [Table/Fig-5]: Goblet cells showing PAS positivity (PAS 200X)

varying thickness along with epithelial whorls in few areas and goblet cells, suggestive of GOC [Table/Fig-3-5].

## DISCUSSION

GOC is a rare lesion with prevalence ranging from 0.012 to 1.3% of all jaw cysts [1]. In 1987, Padayachee and Van Wyk described two cystic lesions with histologic features that did not fit into the known classification of cysts, who called "sialo-odontogenic cyst" [2]. One year later Gardner et al., described eight similar cases and suggested the term "glandular odontogenic cyst" [3]. In 1992, the WHO named the GOC an independent pathologic entity and classified it as a developmental odontogenic cyst [4]. Only 50 cases of GOC have been reported in literature so far [5]. Usually it presents as a painless lesion, but can be painful if neurovascular bundles are compressed or infected secondarily. Most authors agree that there are no radiographic features specific of GOC [1]. Therefore, histopathology is essential for diagnosis.

GOC usually occurs in middle age men and only few cases have been reported in females. The differential diagnosis includes lateral periodontal cyst, botryoid cysts, keratocysts, residual cysts, the central mucoepidermoid carcinoma and the ameloblastoma. These can be differentiated histologically [1].

Microscopically, GOC is characterized by a cyst wall lined by non-keratinized epithelium, with papillary projections, nodular

thickenings, mucous filled clefts, and 'mucous lakes'. It also includes cuboidal basal cells, which may sometimes be vacuolated. There is histological similarity with central mucoepidermoid carcinoma, however, histological features of GOC like epithelial whorls, ciliated cells and intraepithelial microcytes or duct like structures are not seen in central mucoepidermoid carcinoma and help to make the definitive diagnosis [6-8]. Similarly, presence of ciliated epithelium in GOC helps to differentiate GOC from lateral periodontal cyst and botryoid cysts [9]. Certain authors have suggested that GOC shows positive immuno staining for CK-18, CK-19 and Ki-67 and decreased positivity for p-53, which helps to differentiate these tumours especially from central mucoepidermoid carcinoma [10].

Treatment of GOC includes curettage and enucleation, although some authors believe marginal resection to be a more reliable treatment, due to tendency of the cyst to recur after curettage and enucleation. However, no malignant transformation potential seen even though an increased Ki-67 index reported in certain studies [5,6,11].

## CONCLUSION

Glandular odontogenic cyst is a rare lesion, and its differential diagnosis includes both benign and malignant lesions. The radiopathological correlation is required for definitive diagnosis.

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