

# Bilateral Dentigerous Cysts of mandible: A Case Report

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## ABSTRACT

Dentigerous cysts are the most common development odontogenic cysts of the jaws. After radicular cysts, they are most commonly diagnosed in jaws accounting for 24% of all the jaw cysts. These are most frequently associated with impacted third molars. Bilateral cysts are rare and occur typically in association with a development syndrome. They are often asymptomatic and usually diagnosed incidentally during routine examinations. Definitive diagnosis must always be based on the histological examination. Here, we report a case of bilateral dentigerous cyst in the mandible.

**Key Words:** Dentigerous cyst, odontogenic cyst, Impaction, Mandible

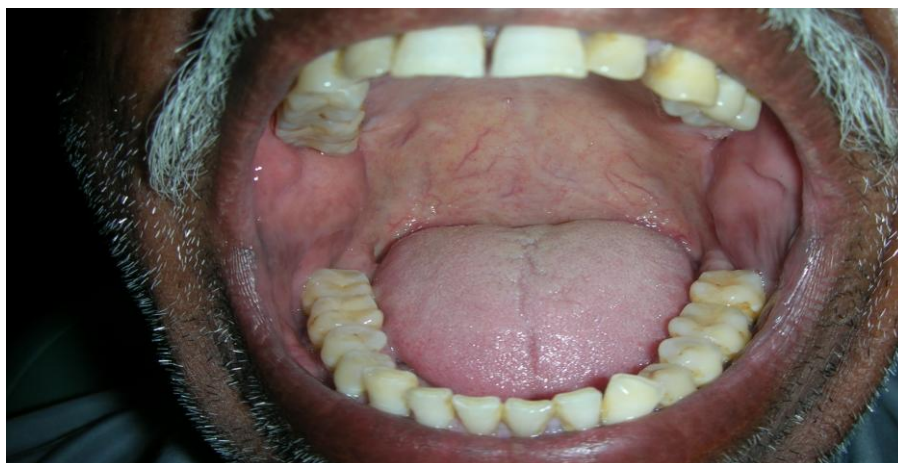
## INTRODUCTION

Dentigerous cysts are the second most common odontogenic after radicular cysts, accounting for approximately 24% of all cysts in the jaws (1). They are defined as pathologic epithelium lined cavities that surround the crown of an unerupted tooth at the level of the Cementoenamel junction. The cyst arises from the separation of the follicle from the crown of an unerupted tooth. Although it may involve any tooth, mandibular third molars are the most commonly affected tooth. Maxillary canine is the second most common affected tooth. Approximately 75% of all dentigerous cysts are found in the mandible.

These cysts are generally asymptomatic and diagnosed incidentally on routine radiographs or during investigation of an unerupted tooth (2). There is usually no pain or discomfort associated with cyst unless secondarily infected. Sign and symptoms arise when the cyst expands enough to cause pain and bone expansion (3).

## CASE REPORT

A 56 years old male patient reported to the Shri Ganesh dental clinic with chief complaint of pus discharge from the right lower third molar region since one month. Intraoral examination reveals missing bilateral mandibular third molars with little pus discharge from distal to right second molar region (Figure 1).



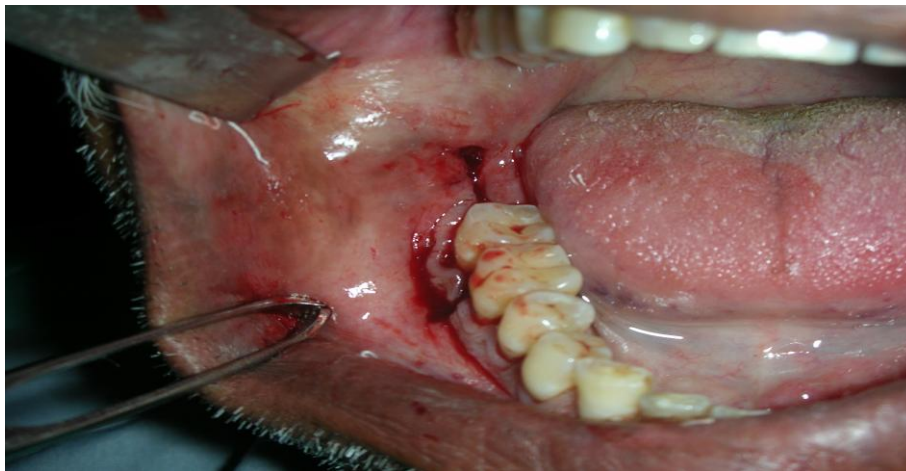
**Figure 1:** Intraoral view of showing no swelling with bilaterally missing mandibular third molars.

No intraoral or extraoral swelling or tenderness in relation to mandibular third molars region was detected. Patient's medical history was nonsignificant. Complete routine blood examination reports were found normal. The orthopantomograph (Figure 2) was carried out which reveals bilateral, unilocular well defined radiolucencies surrounding both unerupted mandibular third molars. The anterior border of right side radiolucency appeared to involve the distal root of the second molar (Figure 2).



**Figure 2: orthopantomograph was carried out which reveals bilateral, unilocular well defined radiolucencies surrounding both unerupted mandibular third molars.**

The clinical diagnosis was dentigerous cysts. Under local anaesthesia, the buccal flap was raised (Figure 3), and right side cyst was enucleated along with the associated third molar Figure (4, 5). The soft tissue specimen was sent for histopathological examination (6). Healing was uneventful.



**Figure 3: Showing the raised buccal flap.**



**Figure 4: Showing exposed tooth and cyst.**





**Figure 5: Shows socket after tooth extraction and cyst removal.**

### DISCUSSION

Although dentigerous cysts are common development cysts, reported bilateral dentigerous cysts are extremely rare. Dentigerous cysts are typically asymptomatic unless secondarily infected. These cysts are diagnosed in the first and second decade of life and most commonly associated with unerupted mandibular third molars.

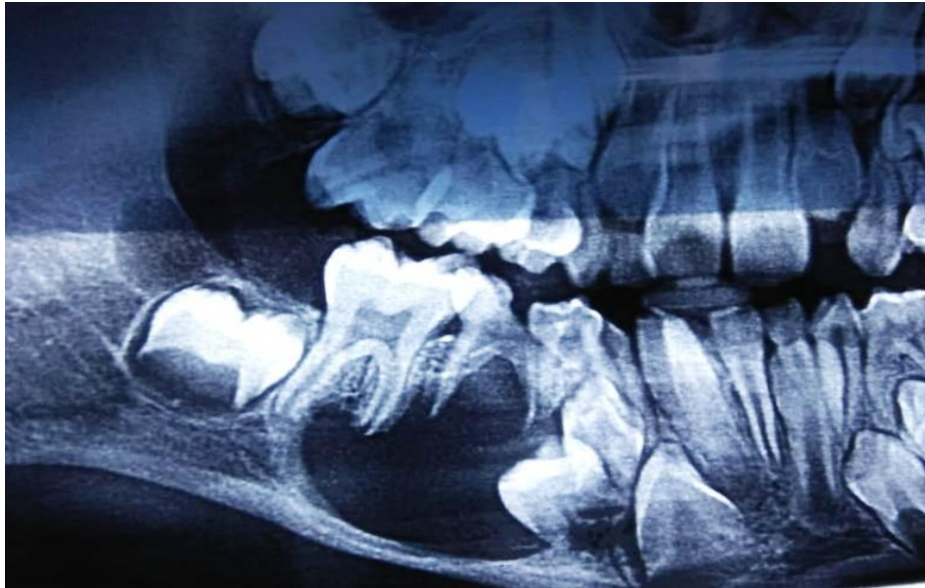
Radiographically, a dentigerous cyst should be suspected if the follicular space is larger than  $5\text{mm}^2$ . The cyst appears as a unilocular radiolucency with well defined sclerotic borders, associated with the crown of an unerupted tooth (Figure 2). Displacement of tooth esp. 3<sup>rd</sup> molar towards inferior border of mandible usually found in radiograph.

Clinically, it should be differentiated from odontogenic keratocyst, unilocular ameloblastoma, adenomatoid odontogenic tumour and ameloblastic fibroma (3, 4). In case of bilateral dentigerous cysts, syndrome or systemic condition should be rule out.

It has been suggested that two type of dentigerous cyst exist (5). One is developmental cysts of the permanent dentition, which usually develop as a result of impacted tooth (Figure 2). These cysts occur in the 2<sup>nd</sup> or 3<sup>rd</sup> decade of life and are discovered on routine radiographs of dentition. The second types are inflammatory cysts that occur in immature teeth, as a result of periapical inflammation and generally due to a nonvital deciduous tooth (Figure 6, 7) or to dissemination of an inflammatory process affecting the follicle of a permanent tooth. These cysts are diagnosed in 1<sup>st</sup> or 2<sup>nd</sup> decade of life.



**Figure 6 Shows cyst lining and third molar of right side.**



**Figure 7: Shows radiographic presentation of dentigerous cyst of inflammatory origin due to non vital deciduous teeth.**

Since cysts can attain considerable size with minimal or no symptoms, early detection and removal of the cysts is important to reduce the morbidity (6). It is therefore important to perform radiographic examination of all unerupted teeth. The orthopantomograph or CT scan may permit a better delineation of the extent of the lesion and its relationship to the adjacent anatomical structures.

The usual treatment of dentigerous cyst is enucleation with removal of impacted or unerupted tooth. Large cysts should be marsupialized to facilitate decompression to avoid the injury of canal or tooth buds. Later, enucleation can be performed if required through more conservative surgical procedure. Marsupialization is preferred line of treatment option for dentigerous cyst, particularly in children. The best line of treatment in dentigerous cyst of inflammatory origin is extraction of offending non vital deciduous tooth followed by marsupialisation of the lesion to allow the eruption of permanent tooth (5). The prognosis is excellent and recurrence is rare, if complete excision is achieved (3).

### CONCLUSION

Since these cysts can attain considerable size with minimum or no symptoms, so early detection and removal is important to reduce morbidity. Hence, routine radiographic examination of all unerupted teeth should be done especially, when any permanent tooth is missing. When bilateral cysts are present, the patient should be investigated for syndrome or any systemic disease.

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