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# EN TOTO REMOVAL OF A LARGE DENTIGEROUS CYST: A CASE REPORT

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# ABSTRACT

Dentigerous cyst is most common odontogenic cyst after radicular cyst.Dentigerous cyst associated with crown of impacted tooth or developing teeth.Generally dentigerous cysts are treated by enucleation .If cyst is large treated by marsupialization followed by enucleation to prevent pathological fracture. In present case we have removed large dentigerous cyst en-toto under local anaesthesia.

KEYWORDS: Dentigerous cyst, Impacted Tooth, Enucleation, En-toto removal, Pathological Fracture.

## INTRODUCTION

Dentigerous cyst results because of enlargement of follicular space of the whole or part of crown of an impacted or unerupted tooth. Dentigerous cyst is the most common odontogenic cyst after the radicular cyst<sup>1</sup>. Dentigerous cysts are associated with the crowns of unerupted or developing teeth. The etiology of cystic formation is unknown, although a study in rats shows that periapical infection produces dentigerous cysts occur over a wide age range, they are most commonly seen during 1<sup>st</sup> to 3<sup>rd</sup> decade with a slight male predilection, and their prevalence appears to be higher in Whites than in Blacks<sup>3</sup>.

## Case report

An eighteen year old female patient reported to our Dental care centre with a complaint of painless swelling of lower front region of face since three months.(**Fig.1**) Examination revealed vestibular swelling extending from the lower left first molar region to the lower right cuspid region, of hard consistency and similar color to the oral mucosa, with mobile anterior teeth and premolars. Panoramic radiographs revealed a unilocular radiolucency involving anterior mandible approximately 6cm ×3cm in size surrounding the crown of an impacted canine present at the lower border of the mandible (**Fig2**). Resorption of the roots of first molar has been noticed . Aspiration of the lesion yielded a straw colored fluid typical of a dentigerous

Differential diagnosis of dentigerous cvst. cvst. odontogenic keratocyst and ameloblastoma was made and planned to do the surgery under local anaesthesia. A crevicular incision given from right lower first premolar to left lower second molar and on either side vertical relieving incisions were given. Mucoperiosteal flap reflected, careful dissection was done not to puncture the cystic lining. (Fig.3). Then the lesion was enucleated and the teeth involved were extracted and primary closure achieved with 3-0 silk under local anesthesia (Fig.4). Histopathological examination confirmed the diagnosis of dentigerous cyst. Post operative healing was good and the six months post operative radiograph revealed excellent bone rehabilitated regeneration.(Fig.5) patient was with removable prosthesis(Fig. 6) after six months.the patient is asymptomatic in two years follow up.

## Discussion

Dentigerous cyst usually occurs in association with an unerupted tooth, most commonly mandibular third molars. Other common associations are with maxillary third molars, maxillary canines, and mandibular cuspids and bicuspids<sup>4</sup>. They also occur around supernumerary teeth and in association with odontomas: but rarely associated with primary teeth.<sup>4, 5</sup>. Many dentigerous cysts are small asymptomatic lesions that are discovered serendipitously during routine radiographic examination. Dentigerous cysts may occasionally be painful, particularly if infected.



Fig.1. Swelling of the left lower jaw



Fig.2. Panoramic radiograph revealed a unilocular radiolucency and an impacted canine



Fig.3. Bony swelling after reflection of the flap



Fig.4. Enucleation of the cyst



Fig.5. Panoramic radiographs after six months with excellent bone regeneration



Fig.6. Rehabilitation with removable partial denture

Although patients may give history of a slowly enlarging swelling<sup>6</sup>. Radiographically, the dentigerous cyst presents as a well-defined unilocular radiolucency, often with a sclerotic border. Since the epithelial lining is derived from the reduced enamel epithelium, this radiolucency typically and preferentially surrounds the crown of the tooth. Three types of dentigerous cyst have been described radiographically<sup>7</sup>, (i) the central variety, in which the radiolucency surrounds just the crown of the tooth, with the crown projecting into the cyst lumen, (ii) the lateral variety, where the cyst develops laterally along the tooth root and partially surrounds the crown and (iii) the circumferential variant of the dentigerous cyst exists when the cyst surrounds the crown but also extends down along the root surface, as if the entire tooth were located within the cyst. One diagnostic dilemma for oral and maxillofacial surgeons is distinguishing between a dentigerous cyst and an enlarged dental follicle. This distinction becomes clinically significant when the surgeon considers whether to submit tissue removed with an impacted third molar for histopathologic examination as opposed to clinical designation as a follicle, with simple disposal of the tissue. The radiographic distinction becomes somewhat arbitrary; however, any pericoronal radiolucency that is > 4 or 5 mm is considered suggestive of cyst formation and should be examination<sup>6,8</sup>. submitted for microscopic Most dentigerous cysts are treated with enucleation of the cyst and removal of the associated tooth. Large dentigerous cysts may be treated with marsupialization when enucleation and curettage might otherwise result in neurosensory dysfunction or predispose the patient to an increased chance of pathologic fracture. This permits decompression of the large dentigerous cyst with a resultant reduction in the size of the cyst and bony defect. At a later date the reduced cyst can be removed in a smaller-scale surgery. Present case discusses En Toto removal of a large dentigerous cyst with excellent recovery in the six months follow-up period with no signs of recurrence.

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