



ORIGINAL RESEARCH PAPER

Pathology

UNILATERAL DENTIGEROUS CYST OF MANDIBLE: A CASE REPORT

KEY WORDS:

Mandible, dentigerous cyst, ramus, impacted molar

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ABSTRACT

Dentigerous cysts are the most common developmental odontogenic cysts. They are usually derived from the epithelial remnants of tooth forming organs. These cysts increase in size gradually. There may also be associated bone resorption. Most commonly dentigerous cyst involves lower 3rd molar mandibular. Here we presenting a case report on dentigerous cyst arising from impacted mandibular third molar in a 26 year old female patient.

Introduction

The dentigerous cysts were described by Paget in 1863.¹ Single dentigerous cysts are very common odontogenic cysts after radicular cysts. The mandibular third molar and maxillary canines are most frequently involved by dentigerous cyst. Dentigerous cyst are most frequently found in population of the age group between 20 and 40 and mostly appear during tooth development in young patients.¹ Radiographs may show a unilocular radiolucent lesion with well-defined sclerotic margins that is associated with the crown of an unerupted tooth.¹

Case report

A 26 year old female patient reported to the department with a chief complaint of pain and swelling in right side of face since 2 months. Patient also complains of mild dull pain in right lower back tooth region, which later resulted in an extraoral swelling 1 month after the pain appeared. The pain was dull, localized and the swelling had gradually increased to the present size. Upon extra oral examination a solitary diffuse swelling of size approximately 5x4cm present on right side of face extending superior-inferior from the ala tragus line to 2cm below lower border of mandible & antero-posteriorly from corner of mouth to tragus of ear. [Fig-1]



Figure-1: Extra oral diffuse swelling present over right side of face

Upon palpation all inspeactory findings were confirmed, the swelling was non tender and soft in consistency. Intra oral examination revealed no abnormality in relation to right lower back tooth region except unerupted 48. [Fig-2]



Figure -2: No abnormality in left vestibular tooth region except unerupted 48

Based on the history & clinical findings a provisional diagnosis of dentigerous cyst along with differential diagnosis of Odontogenic keratocyst & ameloblastoma was made. Patient was advised for OPG which revealed a solitary well defined radiolucency seen involving right ramus, angle and body of mandible. The radiolucency was arising from the CEJ of impacted 48 which was placed high at the level of middle third of the ramus of mandible. There is also root resorption of mesial & distal roots of 47. [Fig-3]



Figure-3: OPG revealed solitary well defined radiolucency involving right ramus of mandible and impacted 48

Based on radiographic finding we gave final diagnosis of dentigerous cyst in right lower back tooth region, although due to uncooperative behavior of patient we could not do treatment and further follow up.

Discussion

The dentigerous cysts are odontogenic cysts that are most frequently found in individuals in the age group between 20 and 40 years.¹ They are usually derived from the epithelial remnants of tooth forming organs.² Single dentigerous cysts are very common odontogenic cysts after radicular cysts. The mandibular third molar and maxillary canine are most frequently involved by that lesion.¹ Dentigerous cyst are developmental origin, some biomolecular

factors can trigger this type of cyst formation. They are occasionally associated with supernumerary teeth and accounting for 10% of all cysts of the jaws² The dentigerous cyst clinically associated with temporary teeth persistence and painless slow growing swelling involving the affected area. This swelling is very firm on palpation indicating cortical expansion.^{2,3} Three types of dentigerous cyst have been described radio-graphically: (1) The central variety, in which the radiolucency surrounds just the crown of the tooth, with the crown projecting into the cyst lumen, (2) the lateral variety, in which the cyst develops laterally along the tooth root and partially surrounds the crown, and (3) the circumferential variant in which the cyst surrounds the crown but also extends down along the root surface as if the entire tooth is located within the cyst.[Figure-4]^{1,2}



Figure-4: Radiographical description of types of Dentigerous cysts

The dentigerous cyst can produce asymmetries, nerve alterations by compression, move teeth and even become malignant ameloblastoma, mucoepidermoid, or epidermoid carcinoma. Histopathological examination of the cyst wall shows the cyst to be lined by reduced enamel epithelium. Connective tissue stroma is loose and rich in acid mucopolysaccharides, and consists of stratified squamous epithelium with myxoid tissue.^{2,3,4} Dentigerous cyst may increase in size, the indicated treatment is surgical removal of the lesion and involved teeth, or decompression to salvage the involved teeth,² but the standard treatment for a dentigerous cyst involves surgical enucleation and extraction of the cyst-associated impacted or unerupted tooth.⁵,

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