

Dentigerous Cyst of Mandible: A Rare Case

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ABSTRACT

The described case deals with a relatively large dentigerous cyst in the area of left canine teeth of the mandible in a fourteen-year-old boy. Dentigerous cysts usually arise from the epithelial sac that surrounds the crown of the unerrupted third molar tooth, but very rarely involve the crown of

other teeth like the mandibular canine in this case. Total enucleation of dentigerous cyst involving the tooth germ was performed after creating a window in the bone overlying the cyst, thus preventing defect in the mandible.

Keywords: Dentigerous Cyst; Mandible; Canine Tooth; Enucleation

INTRODUCTION

Dentigerous cyst is a developmental odontogenic cyst, which apparently develops by accumulation of fluid between the reduced enamel epithelium and the tooth crown of an unerrupted tooth. Dentigerous cysts are the most common of odontogenic and developmental cysts arising in the jaw bone. They are frequently found in association with impacted third molars of the maxilla or mandible. The cyst usually contains one molar crown in the cystic lumen. There is usually no pain or discomfort associated with the cyst unless there is acute inflammatory exacerbation.

In this report, we describe a rare case of a dentigerous cyst involving the canine teeth of the mandible. Clinical and radiological findings of the lesion are presented with histo-pathological observations of the cyst wall.

CASE REPORT

A 14-year-old male patient visited the ENT outpatient department with history of a swelling over the left side of the lower jaw for two months. The lesion was initially small but gradually increased in size over a period of two months. There was a dull aching pain in that region. No history of trauma was reported. There was no other associated significant history. On examination, there was a diffuse swelling over the left side of the mandible. The overlying skin showed no surface changes. The left lower canine tooth was missing and there was a bony hard bulge in the left gingivo-labial sulcus

adjoining the premolars.

An orthopantomogram (OPG) showed an impacted canine tooth in the left side of the mandible with crowding of the incisors and the left premolars of the mandible. There was an oval-shaped radiolucent area surrounding the impacted tooth (Figure 1). A clinical diagnosis of dentigerous cyst of the mandible was made.

The patient was taken for surgery under general anesthesia. A horizontal incision was made on the skin on the lower border of the mandible over the swelling. Skin, subcutaneous tissue and periosteum over the mandible were elevated. The bony cortex overlying the cyst was thinned out. A bony window was created over the cyst and the entire intact cyst was enucleated. The post-operative healing was uneventful. Post-operative OPG showed intact mandibular cortex after complete enucleation of the cyst (Figure 2). Gradual remodeling of the cortex took place over a period of six months. Patient is under regular follow-up and is doing well.

DISCUSSION

Dentigerous cysts are common developmental lesions. Since cysts can attain considerable size with minimal or no symptoms, early detection and removal of the cysts is important to reduce morbidity. Although evidence in the literature suggests that dentigerous cysts occur more frequently during the second decade of life, these lesions can also be seen in children and adolescents. The incidence of dentigerous cysts is twice as high in males as females.

Dentigerous cysts usually arise from the epithel-

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Figure 1: OPG showing large radiolucent shadow in the left mandibular canine region with unerrupted left canine and thinned mandibular cortex



Figure 2: Post-operative OPG shows intact mandibular cortex after complete enucleation of the cyst



-ial sac that surrounds the crown of the unerrupted third molar tooth but very rarely involve the crown of other teeth like the mandibular canine in this case.

Dentigerous cysts develop from follicular epithelium, and follicular epithelium has greater potential for growth, differentiation and degeneration than the epithelium from which radicular cysts arise. Occasionally, other more ominous lesions arise within the walls of the dentigerous cyst, including muco-epidermoid carcinoma from the mucous cells within the cyst walls, ameloblastoma, and squamous cell carcinoma. Histologically, the dentigerous cyst is lined with a stratified squamous non-keratinizing epithelium. Dystrophic calcification and clusters

of mucous cells may be found within the cysts. Marsupialization can be used either as a sole therapy for a cyst or as a preliminary step in management, with enucleation deferred until later. In most instances, enucleation is done after marsupialization. In the case of a dentigerous cyst involving unerrupted permanent teeth, there may not be any residual cyst to remove once the teeth erupt into the dental arch as seen in the present case wherein the unerrupted permanent teeth erupted into the dental arch.

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