



CASE STUDY

MULTIPLE DENTIGEROUS CYSTS – IN A NON SYNDROMIC MALE CHILD!

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ABSTRACT

Dentigerous cysts are one of the common cysts of the jaws, usually associated with crowns of permanent teeth. Multiple dentigerous cysts are rare and are associated with certain syndromes. Non-syndromic multiple dentigerous cysts are very rare. Here we report a case of multiple dentigerous cysts in a non-syndromic patient.

INTRODUCTION

A dentigerous cyst is an epithelial-lined developmental cavity that encloses the crown of an unerupted tooth at the cemento-enamel junction (Ko *et al.*, 1999). These cysts are the second most common odontogenic cysts after radicular cysts (Ko *et al.*, 1999). They account for approximately 24% of all true cysts in the jaws (Ko *et al.*, 1999). The cyst arises from the separation of the follicle from the crown of an unerupted tooth, and although it may involve any tooth, the mandibular third molars are the most commonly affected. Most dentigerous cysts are solitary. Bilateral and multiple cysts are usually found in association with a number of syndromes including cleidocranial dysplasia and Maroteaux-Lamy syndrome (Gorlin, 1970). In the absence of these syndromes, bilateral dentigerous cysts are rare.

Case report

A 11 year old male patient reported to the department with chief complaint of swelling over both sides of lower jaw. There was no relevant past medical, dental, family history and there was no associated syndromes present. On examination the swellings were firm.

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Patient was advised to get a orthopantomograph done, which revealed well defined unilocular radiolucency associated with crowns of 23, 34 and 45 (Image 1). Under local anesthesia 63, 74 and 85 were extracted and cysts were marsupialized. Cysts lining specimen were taken from all the three cysts for histopathological examination, which confirmed the diagnosis to dentigerous cysts (Image 2).

DISCUSSION

Dentigerous cysts are one of the most common developmental odontogenic cysts (Kramer *et al.*, 1992). Dentigerous cysts are the second-most common true cysts of the jaws following radicular cysts (Tsukamoto *et al.*, 2001). Majority of the dentigerous cysts are associated with the permanent teeth during the second decade of life (O'Neil *et al.*, 1989). Most dentigerous cysts are solitary. Bilateral and multiple cysts are usually found in association with a number of syndromes including cleidocranial dysplasia and Maroteaux-Lamy syndrome (Gorlin, 1970). Maroteaux-Lamy syndrome is one of the mucopolysaccharidoses (MPS), a group of diseases resulting from a genetic defect in the degradation of specific mucopolysaccharides. With this syndrome, there is a deficiency of N-acetyl-4-sulphatase that results in impaired degradation of dermatan sulphate, which accumulates in tissues and is excreted in the urine. Dental features include unerupted

dentition, dentigerous cysts, malocclusions, condylar defects, and gingival hyperplasia (Roberts *et al.*, 1984). Cleidocranial dysplasia is an autosomal dominantly inherited disorder that results in a partial or complete absence of clavicles, short stature, frontal and parietal bossing, maxillary micrognathia, prolonged retention of the primary dentition, delayed eruption of the permanent dentition, and unerupted supernumerary teeth (Trimble *et al.*, 1982).



Image 1. OPG

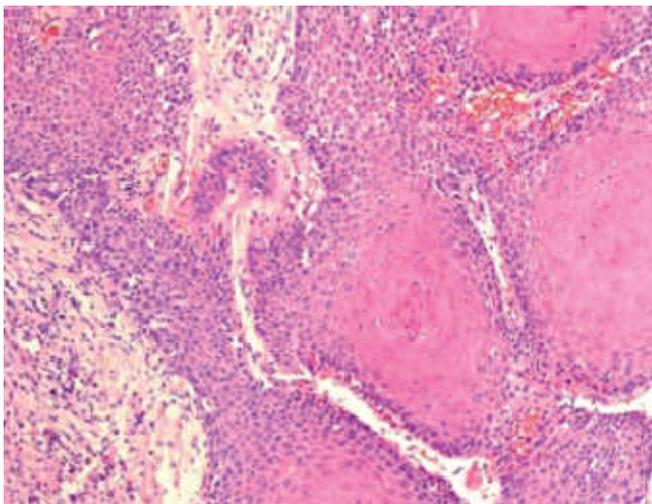


Image 2. Microscopic Section

Dentigerous cysts are usually asymptomatic and are diagnosed incidentally in routine radiographs. Unerupted teeth could indicate the possibility of a dentigerous cyst. A dentigerous cyst can expand causing facial asymmetry. As with other cysts, dentigerous cyst expands the outer cortical plate more than the lingual plate. It may involve other teeth as it expands (Ertas and Yavuz, 2003). Many times the enlarging cyst may displace the mandibular canal and may cause paresthesia due to compression of nerve (Sumer *et al.*, 2007). In the present case there was no history of paresthesia in the lower lip region or loss of vitality of adjacent teeth indicating no compression or nerve damage. The treatment of choice for dentigerous cyst is Enucleation along with extraction of the impacted teeth (Assael, 1992). Although in pediatric patients marsupialization has been considered to save the impacted tooth and developing tooth bud.

It has been seen that tooth eruption potential is more in children who have open apices in the involved teeth (Motamedi and Talesh, 2005; Kirtaniya *et al.*, 2010). In this case the marsupialization was done bone defects were packed with povidone Iodine-soaked gauze, which was changed every week. In marsupialization, a window is created in the cystic wall to evacuate its contents and the lining of cyst is sutured in continuity with the oral mucosa. The disadvantage of this technique is that the pathological lining is left behind. In this case marsupialization was the treatment of choice due to age and developing dentition.

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