



A Case Series of Maxillary Odontogenic Cyst with Literature Review

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ABSTRACT

In this article we report a case series of dentigerous cyst of inflammatory origin along with an odontoma associated with a non-vital primary maxillary central incisor in a 14-year-old female patient and 25-year-old male patient with retained deciduous tooth with impacted canine. Dentigerous cysts are odontogenic cysts and are mostly developmental in origin often associated with an impacted tooth. The treatment modality is usually based on the size of the cyst.

Keywords –Dentigerous cyst, Impacted tooth, Non vital,

Received 23.07.2023

Revised 21.08.2023

Accepted 21.09.2023

INTRODUCTION

Dentigerous cyst also called follicular cyst was coined by Paget in 1983 where the literal meaning of “dentigerous” being “tooth bearing” [1]. They are the second most commonly occurring odontogenic cysts after radicular cyst [2] and are formed due to accumulation of fluid between Reduced Enamel Epithelium and the enamel surface. The cyst is often associated with the crown of an impacted, embedded or unerupted tooth and can also be found enclosing a complex compound odontoma or involving a supernumerary tooth [3]. The mandibular third molar and maxillary canines are involved most often, followed by mandibular premolars and the maxillary third molars. Here we report a case series of dentigerous cyst.

CASESERIES

Case report-1

A 14-year-old female patient reported with a chief complaint of swelling in her upper front tooth region for the past 4years and it continued to increase in size for the past 5 months.No relevant medical history was found pertaining to the swelling and this was the patient ‘s first dental visit. On external examination, there was a large swelling in her upper lip region below the left nostril, protruding the upper lip outward. On inspection intraorally, a large solitary swelling causing bulging of the cortical bone extending from non-vital 61 to 23 region of size 3×6cm and obliteration of left buccal vestibule is evident. On palpation the swelling was firm and non-tender, nonfluctuant, non-pulsatile. The intraoral hard tissue examination revealed non-vital upper left central incisor, anterior spacing, retained central incisor. The radiographs revealed a impacted 21 with a radiolucency extending to the root of 61 and 62 and impacted 23 extending to the left maxillary sinus. Irregular radio opaque mass noted in the periapical region of 61 and 62 .On correlating the clinical examination and radiographical investigation diagnosis was made as dentigerous cyst associated with impacted 21 with a complex odontoma

Case report 2

A 25-year-old male patient reported with a chief complaint of retained deciduous teeth in the upper left front tooth region and he wants to extract it. No other relevant medical history. No gross facial asymmetry noted .On intra oral examination retained 63 was noted and clinically 23 is missing and no evidence of intra oral swelling .IOPA reveals a impacted maxillary canine with a coronal radiolucency around 23.Maxillary Occlusal radiograph showed a impacted 23 with a coronal radiolucency arising from one side of cervical portion of 23 end in the other side with sclerotic border .Radiological diagnosis was given as lateral variety dentigerous cyst associated with impacted 23.

Differential diagnosis can be

- Adenomatoid odontogenic tumour.
- Calcifying epithelial odontogenic cyst.
- Odontogenic keratocyst.
- Unicystic ameloblast

CASE REPORT 1:



Fig 1a-Intra oral swelling noted in labial alveolar mucosa extending to the vestibular region

Fig 1 b IOPA of upper left anterior region shows a impacted tooth with irregular radiopaque mass



Fig 1c-OPG reveals impacted 21 associated with pericoronal radiolucency with a irregular radiopaque mass

CASE REPORT 2:



FIG 2a Intraoral photograph reveals a retained deciduous canine 53.

Fig 2b IOPA reveals retained 53 with impacted 13 with pericoronal radiolucency in the lateral aspect



Fig 2c Maxillary occlusal radiograph shows a impacted canine with apericoronal radiolucency with a sclerotic border and a retained deciduous 53.

DISCUSSION

The frequency of dentigerous cyst in general population is estimated to be around 1.44 cysts for every unerupted teeth⁴. They are usually associated with permanent teeth and the deciduous tooth is rarely involved. The frequency in children is relatively low, and 4–9% of these cysts occur in the first 10 years after birth with a slight male predilection.⁵ In the present case the cyst was reported in a 14-year-old child who is a female. Literatures report that there are two types of dentigerous cyst namely Developmental and inflammatory types [6]. Rarely, the dentigerous cyst develops as a result of periapical inflammation from a nonvital primary tooth. The spread of periapical inflammation may affect the germ of the permanent tooth and may induce the formation of the cyst [7]. Therefore, the inflammatory dentigerous cyst is usually associated with the roots of a nonvital primary tooth. The presence of non-vital primary tooth suggests a possibility of an inflammatory dentigerous cyst [8]. Clinically, the cyst is mostly asymptomatic and are discovered as an incidental radiographic finding or when acute inflammation, infection or swelling develops. The cyst appears as well circumscribed, unilocular, usually symmetric radiolucency around the crown of an impacted tooth. Radiographically the size of the cyst (is >5mm) helps to distinguish from a normal follicular space (3-4mm) [9]. The radiological variations of the cyst may be observed as central, lateral and circumferential [10]. The expansion of the cyst is usually related to an increase in the osmolarity due to the passage of inflammatory cells and desquamated epithelial cells into cystic passage. The available options for the treatment of these lesions in children include total enucleation of the cyst with primary closure or marsupialization [11]. Marsupialization of the cyst is the treatment of choice in case of large cyst and gives a chance to the unerupted tooth to erupt and can also prevent pathological fracture¹². Enucleation with primary closure is the treatment choice in case the cyst is small where even the tooth associated with the cyst needs to be removed and it gives an added advantage of reducing the occurrence of the potential complication¹³. However early and prompt diagnosis is the most important factor as it leads to better prognosis and quality of life.

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CITATION OF THIS ARTICLE

R.Logesh, .S.Angelinteena, N.Narmatha, ArshaJohny CRRI, R.M Aravindhswamy, Akhila. V CRRI. A Case Series of Maxillary Odontogenic Cyst with Literature Review. *Bull. Env.Pharmacol. Life Sci*, Vol 12 [11] October 2023: 318-321