# PARADENTAL CYST- A CASE REPORT

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## Abstract

The paradental cyst is an odontogenic cyst of inflammatory origin, which occurs on either the buccal, distal, or (rarely) mesial aspects of partially erupted mandibular third molars. In most cases there is an associated history of recurrent pericoronitis. We present the case of a 23 year old male patient who complained of pain and swelling in the left mandibular region. Radiograph showed a partially impacted left mandibular third molar and whose histopathological picture revealed the diagnosis of paradental cyst.

**Key words:** paradental cyst, pericoronitis, mandibular molar.

## Introduction

Paradental cyst is an odontogenic lesion of inflammatory origin that has few clinical signs & symptoms apart from recurring acute episodes. Cysts of inflammatory origin occurring on the lateral aspects of the roots of partially erupted mandibular 3rd molars associated with a history of pericoronitis, have been described by Craig (1976) and termed as Paradental Cyst[1]. A well defined radiolucency associated with the roots or distal to the crown may be seen radiographically. The reduced enamel epithelium and epithelial rests of Malassez are believed to have the potential for proliferation in response to inflammatory stimuli and, thus, give rise to several different odontogenic cysts, such as the paradental cyst.

The clinical, radiographic, and histologic findings in a case of Paradental Cyst in a 23 year-old male patient are reported underneath.

## Case Report

A 23 year old male came to the Department of Oral & Maxillofacial Surgery at I.T.S C.D.S.R College in September 2008 for a routine dental checkup. He described a recurrent spontaneous pain localized to left mandibular third molar. Clinically, mild inflammation was seen in the overlying mucosa of the partially erupted, horizontally impacted third molar. (figure 1)

Radiograph disclosed a horizontally impacted 38 with a radiolucency surrounding the distal root of second molar. (figure 2)

The tooth along with pericoronal tissue was surgically removed. Differential diagnosis of enlarged follicular sac, dentigerous cyst, and paradental cyst were given.

Microscopic examination revealed 2-3 cell layers of cystic lining with few areas of hyperplasia (figure3). The lining epithelium exhibited areas of spongiosis. The connective tissue stroma was fibrous to loose in nature with aggregates of cholesterol clefts associated with giant cells and a chronic inflammatory infiltrate. (figure4)

## Discussion

Paradental Cyst is considered a rare lesion pertaining to its underdiagnosis. Lindh and Larsson believe that paradental cyst has been previously misdiagnosed as a dentigerous cyst, lateral radicular cyst or merely as pericoronitis or some other entity related to inflammatory conditions of the dental follicle[2]. Another fact that could add to this is that histopathological analysis of extirpated follicular sac is rarely done. On the other hand, the relative recent characterization of this cyst can be a contributing factor to its non-recognition[2]. It was included in the WHO Histological Typing of Odontogenic Tumors for the first time in 1992, although it had been described in several clinicopathological studies in specialized journals since 1970. Considering these facts it seems reasonable that new cases be reported and the variety of clinical presentations be discussed to increase the awareness about this lesion.

According to the World Health Organization, the paradental cyst is defined as "A cyst occurring near the cervical margin of the lateral aspect of a root in consequence of an inflammatory process in a periodontal pocket. A distinctive form of paradental cyst occurs on the buccal and distal aspect of erupted mandibular molars, most commonly the third molars, where there is an associated history of pericoronitis."

Most cases described in the literature till date have occurred in association with mandibular third molars, less frequently in the second, and first molars, and rarely in premolars or incisors/canines. Colgan et al believe that food impaction plays an essential role in the pathogenesis of the paradental cyst by causing an inflammatory reaction[3]. However, the buccal location of the lesion seems to be related to the presence of an enamel projection in a great number of cases[4,5].

The radiographic aspects of paradental cyst is always characterized by a well defined radiolucency associated with the roots on the buccal aspect. Cases in which the lesion is related to the distal surface of the crown could represent lateral dentigerous cyst[6].

The histopathological features of the Paradental cyst are identical to the radicular cyst, which makes the pulp vitality test, a key factor in the differential diagnosis. It presents as a hyperplastic non-keratinized stratified squamous epithelium with the connective tissue showing a heavy inflammatory infiltrate If the paradental cyst can present variable clinical and radiographic signs, in addition to being confounded with the radicular cyst at the microscopic level, it is mandatory to correlate all clinical, radiographic, and histologic data to obtain a definitive diagnosis for isolation of these two entities. Surgical findings, such as bony cavitation, cystic content, and location of lesion adherence, can also provide few

important clues[4].

Surgical removal of the tooth and the paradental cyst has been considered the treatment of choice when the involved tooth is a third molar. Enucleation of the lesion with the maintenance of the associated tooth can be indicated when the first or second molars are involved. In all cases, recurrence is rare, provided that the lesion has been completely removed[7].

## Conclusion

The presence of a paradental cyst should be considered when recurrent inflammatory periodontal processes are associated with partially erupted vital teeth, especially mandibular molars, even in absence of characteristic radiographic findings. A clinicopathologic correlation, incorporating the surgical, radiographic, and histologic findings, is required to obtain a conclusive diagnosis of paradental cyst.

## References


1. Mervyn Shear. Varghese publishing house. Cysts of The Oral Regions. 3rd edition; 136.
2. Kanno C, Gulinelli J, Nagata M, Soubhia A, Crivelini M. Paradental Cyst: Report of Two Cases. J of Periodontology 2006; 77: 1602-06.
3. Colgan CM, Henry J, Napier SS, Cowan CG. Paradental Cysts. A role for food impaction in the pathogenesis? Br J Oral Maxillofac Surg 2002; 40: 162-168.
4. Craig GT. The paradental cyst: A specific inflammatory odontogenic cyst. Br Dent J 1976; 141: 9-14.
5. Ackermann G, Cohen M, Altini M. The paradental cyst: A clinicopathologic study of 50 cases and review of the literature. J Oral Maxillofac Surg 1987; 64: 308-12.
6. David LA, Sandor GKB, Stoneman DW. The buccal bifurcation cyst: Is non surgical treatment an option. J Can Dent Assoc 1998; 64: 712-16.
7. Phillipsen, Reichart P, Ogawa I, Suei Y, Takata T. The inflammatory paradental cyst: a critical review of 342 cases from a literature survey, including 17 new cases from the author's files. J Oral Pathol Med 2004; 33: 147-55.


## Legends of Figures

Fig. 1: Photograph showing swelling on left side of face.

Fig. 2: Radiograph showing horizontally impacted 38 with radiolucency surrounding distal root of 2nd molar.

Fig. 3: Epithelium showing 2-3 cell layers of cystic lining with areas of spongiosis (x40)

Fig. 4: Connective tissue stroma with aggregates of cholesterol clefts associated with giant cells and a chronic inflammatory infiltrate. (x40)