PARADENTAL CYST ASSOCIATED WITH AN UNERUPTED WISDOM TOOTH


ABSTRACT

The paradental cyst is an odontogenic cyst occurring near to the cervical margin of the lateral aspect of a root as a consequence of an inflammatory process in a periodontal pocket. A distinct form of the paradental cyst occurs not infrequently on the buccal aspects of erupted mandibular third molar, where there is an associated history of pericoronitis. A search of the literature revealed that these cysts had all been reported in relation to partially, newly or fully erupted molars. This report presents one case in which the cyst was noticed to be associated with an unerupted third molar. The histological appearance of the cyst and the gross relationship to the cemento-enamel junction is similar to those typical of paradental cysts reported in the literature. However, the radiographic and clinical appearance of the tooth being unerupted do not tally with paradental cyst and yet exclude the diagnosis of dentigerous cyst. The diagnosis of dental follicular tissue was excluded based on the histopathological presentation. The authors suggested that this case may represent an early form of paradental cyst which in the past may have been dismissed as dental follicular residues and thus, the prevalence of paradental cyst may have been under reported in the literature.

Key words: paradental cyst, unerupted tooth, dental follicular tissue.

INTRODUCTION

Since 1970, certain odontogenic cysts of inflammatory origin have been described under the terms inflammatory collateral cyst (1,2), inflammatory lateral periodontal cyst (3), paradental cyst (4) and mandibular infected buccal cyst (5). These cysts were usually found adjacent to the cervical margins of partially or fully erupted mandibular molars with vital pulp. Most often they occurred at the buccal and/or distal end and rarely, mesial aspects of the tooth roots. They were believed to have arisen as a consequence of inflammatory processes within the periodontal pockets. Radiographically, they usually presented as well-defined radiolucencies superimposed on the roots of affected teeth. The histological features were similar to that of a radicular cyst.

The first publication by the World Health Organization (WHO) in 1971 on the classification of odontogenic tumours did not mention the existence of such cyst as a separate entity (6). Radicular cyst was listed as the only inflammatory odontogenic cyst. However, reports over the past two decades spurred debates over the existence of such cyst as a separate entity. Eventually, in the second edition of the WHO's publication on the classification of odontogenic tumours (1991), such cysts were recognised as a separate entity (7). The nomenclature given to such cysts was the "Paradental (Inflammatory Collateral, Mandibular Infected Buccal) cyst".

The paradental cyst was defined by WHO in 1991 as a cyst occurring near to the cervical margin of the lateral aspect of a root as a consequence of an inflammatory process in a periodontal pocket (7). It was believed that this cyst arose from odontogenic epithelium in the superficial part of the periodontal ligament related to a vital tooth. The WHO publication in 1991 had also described a distinct form of the paradental cyst that occurs on the buccal and distal aspect of an erupted mandibular molars with an associated history of pericoronitis (7).

In this paper a case of an atypical odontogenic cyst is presented. The suitability of the cyst being considered as an early paradental cyst is discussed.

CASE REPORT

A 23-year-old Chinese female came to the Department of Oral and Maxillofacial Surgery with a complaint of pain on her right mandibular third molar for the past few days. The tooth was partially erupted i.e. part of the crown could be seen clinically.

A dentopantomogram (DPT) taken showed that her right mandibular third molar was slightly mesially inclined. The DPT also showed the presence of an unerupted left mandibular third molar with a slight radiolucency distal to the tooth root area (Figure 1). Two overerupted left and right maxillary third molars were also present. The right maxillary and mandibular third molars were removed with the patient under local anaesthesia.