Clinicopathologic study of odontogenic keratocysts in
Singapore and Malaysia

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Abstract: This was a retrospective study of odontogenic keratocysts in people from the Singapore-Malaysian region. The purpose of this study was to present the clinicopathologic features of odontogenic keratocysts in the Oriental population and to compare these data with those from other reported studies. Biopsy records from 1981 to 1992 of 61 cases of odontogenic keratocysts from patients in Malaysia and Singapore showed that 42.6% of patients were female and 57.4% of patients were male. Among patients with cysts, 75.4% were Chinese, 6.6% were Malays, 9.8% were Indians and 8.2% were other ethnic groups. The mean age of these patients was 26.98 ± 15.38 years with a peak incidence occurring in the second to fourth decades. The location of the lesions was more often in the mandible (65.5%) than the maxilla (31.0%). There was a marked predilection for lesions to occur in the posterior mandible. Histologically, 90.2% of the cysts were lined with a parakeratinised stratified squamous epithelium while only 3.3% of the cysts were lined with orthokeratinised stratified squamous epithelium. Mixed parakeratinised and orthokeratinised epithelial linings were observed in 4 cases (6.5%). The cyst linings were mainly uninfammed (95.1%). Inflammation of the cyst wall was found in 42 cases (68.8%). Twelve (19.7%) cases contained keratin in the lumen. A satellite cyst was observed in only 6 cases (9.8%). In conclusion, most clinical and histological features seen in this study were similar to those found for Caucasians. The only clinical feature that was different was the peak age incidence, that ranged from the second to fourth decades, with an absence of a second peak. Odontogenic keratocysts presenting at the site of the dentigerous cyst were observed in 7 cases (11.5%). (J. Oral Sci. 42, 9-14, 2000)

Key words: cyst; odontogenic keratocyst; clinical; histology; Orientals.

Introduction

The odontogenic keratocyst (OKC) is a cyst arising in the tooth-bearing areas of the jaws, or posterior to the mandibular third molar, and is characterised by a thin fibrous capsule and a lining of keratinised stratified squamous epithelium usually about five to eight cells in thickness and generally without rete ridges (1). It represents about 10-12% of all developmental odontogenic cysts (1). It is an unusual odontogenic cyst because of its unique clinical behaviour and high recurrence rate. The diagnosis of an OKC is made based on its specific histopathologic features.

A number of good articles have been written about the clinicopathologic features of odontogenic keratocysts (2-26). However, the data for these studies were obtained from predominantly Caucasian populations. The purpose of this paper was to present the clinicopathologic features of OKCs in the Oriental population, specifically from the multiethnic populations in Singapore and Malaysia; and to compare these data with data from other reported studies.

Materials and Methods

The materials for this study were obtained from specimens submitted to the Histopathology Laboratory, Dental School, University of Singapore (1981-1991) and the Oral Pathology Laboratory, Dental Faculty, University