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ORIGINAL ARTICLE

Odontogenic tumors: clinical and pathology study of 238 cases

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Summary

Odontogenic tumors are neoplasms that develops exclusively in the gnathic bones; they originate from odontogenic tissues, by epithelial or mesenchymal proliferation, or both. **Aim:** To evaluate the incidence of odontogenic tumors in a specific institution, and to compare these findings with other studies in the literature. **Study format:** A cross-sectional cohort retrospective study. **Material and method:** The sample was obtained from the files of patients with odontogenic tumors diagnosed between January 1992 and March 2007 (15 years). Cases in which the diagnosis could be adapted to the new World Health Organization (WHO) of 2005 were included. Data such as gender, age, anatomical site, histological type and symptomatology were analyzed. **Results:** Odontogenic tumors were 4.76% of all biopsied lesions within the studied period. The mean age was 30.7 years; 57% of the patients were male. The keratocystic odontogenic tumor was the most prevalent histological type (30%), followed by the ameloblastoma (23,7%). The rate of asymptomatic cases was 75.7%. **Conclusion:** Odontogenic tumors occurred more frequently in females, in the second and third decades of life, and more commonly in the mandible; most cases were asymptomatic.

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INTRODUCTION

Odontogenic tumors are a heterogeneous group of lesions with variable clinical and pathohistological features. The biological behavior of these tumors includes hamartomatous proliferation, non-aggressive benign tumors, and aggressive and malignant tumors.[1] There has been considerable interest in odontogenic tumors by oral pathologists, who have studied and catalogued these tumors for decades. These tumors are 2.5% of all biopsied lesions in dental offices.[2,3]

Although many retrospective studies have been conducted in Africa,[4,5,6] Asia,[7] Europe,[8,9] and North America,[10] unanswered question still remain about the relative frequency and the incidence of certain odontogenic tumors.[11]

The geographical distribution of these lesions is variable.[2] Many studies in different part of the world have shown differences in the relative prevalence of these tumors.[12] Few reports have been published in English about the frequency of odontogenic tumors in Latin America, particularly in Brazil.[13] The frequency was 1.29%[14] in a Chilean study of 362 cases.

Various attempts at classification of these tumors have been published to define diagnostic criteria, given the diversity of lesions that may arise from odontogenic tissues.1

The first classification of these tumors was published in 1971, based on a 5-year joint effort coordinated by the World Health Organization (WHO).12 An updated edition of this classification was published in 1992.[15] A new classification was proposed in 2005, which included the odontogenic keratocyst as a benign odontogenic tumor.[16]

The purpose of this study was to investigate the epidemiological behavior of this heterogeneous group of tumors across a 15-year period (1992-2007) and to compare these data with those in the literature.

MATERIAL AND METHODS

A retrospective study was made of cases of odontogenic tumors recorded at our institution between January 1992 and March 2007. The variables gender, age, anatomical site, histological type and symptoms were analyzed in 238 histopathology reports.

In reports with recurring tumors, the histological appearance of the first and recurring tumors was compared and considered as a single case.

The diagnoses were reassessed and adapted to the 2005 WHO classification.[16]

After the sample was obtained, a database was generated using the SPSS (v. 13.0) statistics software; the chi-square test was applied to check the statistical significance of the findings. A p value below 0.05 was considered statistically significant.

This study was duly recorded by the Research Ethics Committee of our institution (protocol number 135717/07).

RESULTS

Patients were distributed according to the data as follows:

Table 1. Distribution of patients according to gender.

Histological types	Gender			
	Male		Female	
	N	%	n	%
Ameloblastoma	30	52,6	27	47,4
Cementoblastoma	1	25	3	75
Keratocystic Odontogenic Tumor	30	43,4	39	56,6
Calcifying Epithelial Odontogenic Cyst	7	46,6	8	53,4
Ameloblastic Fibroma	3	75	1	25
Ameloblastic Fibrodontoma	-	-	1	100
Mixoma	8	53,4	7	46,6
Odontoma	17	31,4	37	68,6
Adenomatoid Odontogenic Tumor	3	23	10	77
Calcifying Epithelial Odontogenic Tumor	3	60	2	40
Squamous Odontogenic Tumor	-	-	1	100
TOTAL	102		136	

p>0,05 - chi-square test