



HISTOPATHOLOGICAL EVALUATION OF ODONTOGENIC TUMORS AT TERTIARY CARE CENTRE

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ABSTRACT

Background: Odontogenic tumors arise from remnants of embryonic tissue destined to develop into teeth & associated structure. They originate from remnants of odontogenic epithelium, mesenchymal or combination of cellular elements that comprise the tooth-forming apparatus, clinical behaviour ranges from hematoma like proliferation to benign and invasive neoplasm

Objective: Purpose of study to analyse frequency of benign and malignant lesion, male female ratio, most common site for lesion and age of patient at the time of presentation.

Material and Method: This study was carried out between January 2013 to May 2015 at department of pathology of the Tertiary Care Teaching Hospital Patient data such as patient age and histopathologies of tumors were collected.

Result: We found a total no of 115 odontogenic tumors; of this 87 were benign; of which keratosis with dysplasia (10.57 %) and keratosis without dysplasia (13.91 %) are common. Twenty one were malignant of which squamous cell carcinoma is most common and 7 were inflammatory lesions. The male female ratio was 1.3:1

Conclusion: Among odontogenic tumors, benign condition is most common with mandible is the most common. The tumours show male predominance with common in 5th decade.

Key Words: Odontogenic tumors, Keratosis without dysplasia and with dysplasia, Squamous cell carcinoma

INTRODUCTION

Odontogenic tumors are uncommon lesions of the mandible and maxilla.^[1] The odontogenic tumors have shown geographic variations in their distribution and frequency [5, 6]. Generally, we use the latest classification of the World Health Organization (WHO)^[1]. Several studies show differences in the relative frequency of odontogenic tumors^[2-3] in different geographical areas.

The present study reviews 115 cases of odontogenic tumors diagnosed at an oral diagnosis centre, determining the type, relative frequency and distribution of the lesion as to patient's age and sex as well as its location, in order to provide data for comparison with the results of previously published studies from other oral diagnosis services.

MATERIAL AND METHOD

This study was carried out from January 2014 to May 2015 at Department of Pathology. Patient data search as patient age, detailed clinical history, radiological investigations were collected. The tissue is received in 10 % buffered formal saline which was used as fixative for all specimens. Grossly multiple representative tissue sections of size ranging from 0.6x0.6 cm² to 1x1 cm² tissue sections were taken, processed by automatic tissue processor and embedded in paraffin. Microscopic examination was carried out. Histological features were studied in detail; diagnosis is made and correlated with other studies.

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OBSERVATION

Table 1: Histopathological Diagnosis of Dental Tumours

	Diagnosis	Total	%
Benign	keratosis without dysplasia	16	13.91%
	keratosis with dysplasia	11	10.57%
	Mucocele	10	9.25%
	Fibroma	9	8.57%
	Leukoplakia	8	6.95%
	Myxoma	5	4.76%
	pyogenic granuloma	5	4.76%
	Dentigerous cyst	4	3.80%
	Ameloblastoma	3	2.85%
	Lobular capillary hemangioma	2	1.90%
	Oral submucous fibrosis	1	0.95%
	Lipoma	1	0.95%
	Epidermoid cyst	1	0.95%
	Benign fibro epithelial polyp	1	0.95%
	Benign inflammatory ulcer	1	0.95%
	Verrucous hyperplasia	1	0.95%
	Total	79	60.03%
Malignant	Squamous cell carcinoma	21	18.26%
	Verrucous cell carcinoma	7	6.66%
	Non- hodgkins lymphoma	1	0.95%
	Total	29	22.34
Inflammatory	Inflammatory Lesions	7	6.66%
	Total	7	6.66%
	Grand total	115	100.00%

RESULT

During the present study, the most common lesion we encounter is keratosis without dysplasia (13.91 %) followed by keratosis with dysplasia (10.57 %). (Table 1).

All the odontogenic tumours are more common in male compare to female. (Table 2).

DISCUSSION

Odontogenic tumors are relatively uncommon lesion. In our study, benign lesion is most common as compare to malignant. In the present study keratosis with dysplasia (18.97 %) followed by keratosis without dysplasia (10.57%) is common among benign lesion. In studies carried out in Turkey⁴the ameloblastoma was the most prevalent tumors. Probably, such differences result from geographical variations^[6] and awareness of people seeking early treatment and diag-

Table 2: Frequency of Odontogenic Tumors in Sex

	Male(%)	Female (%)
Benign	56 %	43 %
Malignant	58 %	42 %

nosed earlier in tertiary health care centre. Among malignant lesion squamous cell carcinoma (18.26 %) is most common may be due to tobacco chewing, alcohol, and cigarette smoking among Indian population,^[7] which matches with those of Brazilian (5.5%),^[8] Chinese (6.0%).^[9] Age of patients present with odontogenic tumors ranged from 9- 75 years with median age 5th decade ,similar to Sriram *et al.*,^[10] Avelar *et al.*^[12] Fernandes *et al.*,^[13] and Okada^[11] studies reported the average age of 39.1. Maxilla is the most common site for odontogenic tumors. According to PHILIPSEN; RE- ICHART^[15] (1998) in a review of the literature carried out in 1991, this type of lesion has been more frequently found in the maxilla than in the mandible. According to our study

male female ratio 1.4:1, in most of the previous studies, in terms of gender, Odontogenic tumors had a rather similar distribution for males and females. Nonetheless, there was a female preponderance in studies done by Regezi,^[16] Wu and Chan^[17] and Santos *et al.*,^[18]

CONCLUSION

Among odontogenic tumors benign condition is the most common with predominance of keratosis with dysplasia followed by keratosis without dysplasia among them and among malignant conditions squamous cell carcinoma is most common & male predominance with maxilla is most common site for all Odontogenic tumors. They are common in 5th decade is most common age of presentation.

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