



Retrospective Assessment of Prevalence of Orofacial Cysts and Tumors- An Institutional Descriptive Study

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Received: December 17, 2019

Published: January 11, 2020

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Abstract

The knowledge of the epidemiology of odontogenic cysts and tumors is limited in India owing to inadequate data management at primary healthcare level. Therefore, this retrospective study was designed to determine the prevalence of orofacial cysts and tumors in south Indian population according to age and gender.

Archived documents over a period of 5 years were analysed, tabulated and subjected to descriptive statistical analysis. Result revealed the common occurrence of odontogenic cysts, followed by benign odontogenic tumors and malignant odontogenic tumors. All the cysts and tumors of odontogenic origin showed slight male predominance.

It is of utmost importance to initiate preventive measures and initial screening protocols for maxillofacial pathologies. Such strategies require regular epidemiologic monitoring of the oral cavity and associated lesions.

Keywords: Odontogenic Cyst; Odontogenic Tumour; Benign Tumors; Malignant Tumors; Prevalence

Introduction

Cysts and tumors derived from the odontogenic tissues constitute an unusually diverse group of lesions. This diversity reflects the complex development of the dental structures, since all these lesions originate through some alteration from the normal pattern of odontogenesis [1]. These orofacial cysts and tumors are known to exhibit geographic variations in prevalence and pattern of occurrence [2]. The knowledge of the epidemiology of odontogenic cysts and tumors is limited in a developing nation like India, which may be attributed to inadequate documentation in our hospitals and health care centres [3]. However, the present retrospective study was designed to determine the prevalence of orofacial cysts and tumors in an Indian population according to age and gender. Descriptive statistical analysis of archived documentation over a period of 5 years was done to provide epidemiological information at an institutional level.

Materials and Methods

A record based descriptive study was conducted using the clinical and histopathological records of the orofacial cysts and tumors documented in the department of oral medicine and radiology at a prestigious dental college and hospital of South India over a period of 5 years from 1st January 2006 to 31st December 2010. A total of 34368 outpatients seeking dental treatment were included in the study out of which 764 patients were diagnosed with an orofacial cyst or tumor. The patients were divided into three groups based on age: 18 - 30 years, 31 - 50 years and, more than 50 years. Data regarding age, gender and histopathological records were also compiled and analysed.

Results and Discussion

Retrospective descriptive analysis of a total of 34619 patients enrolled for treatment at JSS dental college and hospital between January 2006 to December 2010 revealed 495 (1.4%) cases of

cyst, 165 (0.5%) cases of benign tumors and 104 (0.3%) cases of malignant tumors. Table 1 shows the yearly distribution of

orofacial cysts, benign tumors and malignant tumors. Table 2 shows distribution of the lesions according to age groups and gender.

Year/ lesion	2006		2007		2008		2009		2010		Total	
Lesion	Pa-tients	Per-cent	Pa-tients	Per-cent	Pa-tients	Per-cent	Pa-tients	Per-cent	Pa-tients	Per-cent	Pa-tients	Per-cent
Cysts	92	1.2	69	0.9	82	1.5	186	2.4	66	1.0	495	1.4
Benign tumors	23	0.3	48	0.6	25	0.4	50	0.6	19	0.3	165	0.5
Malignant tumors	11	0.1	34	0.5	13	0.2	37	0.5	9	0.1	104	0.3
Total	7435	100.0	7456	100.0	5605	100.0	7762	100.0	6361	100.0	34619	100.0

Table 1: Yearly distribution of orofacial cysts, benign tumors and malignant tumors.

	Age Group (years)	Males	Females
Cysts	18-30	60	30
	31-50	154	101
	Above 50	83	67
Benign Tumors	18-30	23	21
	31-50	37	32
	above 50	29	23
Malignant Tumors	18-30	5	3
	31-50	18	20
	above 50	32	26

Table 2: Distribution of the lesions according to age groups and gender.

Incidence of cysts was noted to be higher than tumors. Cysts were encountered thrice more commonly than benign tumors and 4.76 times more frequently than malignant tumors. Prevalence of cysts and benign tumors was noted to be highest in 31- 50 years of age (51.51% and 41.81% respectively) whereas malignant tumors were most prevalent above 50 years of age (55.77%).

Regarding gender distribution, these lesions overall showed slight male predominance. Out of 495 cases of cysts, 297 cases were males (60%) and females 198 (40%); out of 165 cases of benign tumors, male constituted 89 cases (53.93%) and female 76 (46.06%) cases; whereas out of 104 cases of malignant tumors, 55 cases (52.88%) were male and 49 (47.12%) were females.

The male predominance of these lesions might be related to the fact that men are more likely to neglect their oral hygiene and are more prone to trauma as well [4]. Orofacial cysts and tumors can

grow to a larger size, resulting in facial deformity, destruction of facial structures and difficult surgical management. Therefore, it is essential that these lesions are detected as early as possible to minimize any necessary surgery [5].

Conclusion

Regular epidemiologic monitoring of the oral cavity lesions within a population is important for initiation of preventive approaches and future planning. More awareness campaigns are necessary, especially at the primary healthcare level, to educate the populace on the need for early presentation at treatment centres. To determine the global epidemiological burden of these lesions we urge further prevalence studies to be performed in the Indian subcontinent and the world [2].

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