

Original Article

## Benign Soft Tissue Lesions of Oral Cavity: A Histopathological Study

Smita S Masamatti<sup>1\*</sup>, Alka V Gosavi<sup>2</sup>

1. Assistant Professor, Sapthagiri Institute of Medical Sciences and Research Centre, Bengaluru
2. Professor, Government Medical College, Miraj, Maharashtra, India.

### Abstract

**Background:** To describe the histopathological types and frequency of the most common benign tumours of oral cavity reporting to the government referral hospital at Miraj in Maharashtra state. **Materials and Methods:** A retrospective analysis was made of the five year records of reports of oral biopsy samples of patients maintained by the department of pathology. The data obtained was compiled for age, gender, site of the lesion and the histopathology features of the lesions. **Results:** Seventy of the 642 biopsy samples of the oral lesions reported in this five year period were categorised as benign oral tumours. Fibroma (48.6%) followed by squamous papilloma (28.6%) were found to be the commonest benign tumours. The buccal mucosa was the most commonest site of these benign tumours (44.3%). **Conclusions:** Fibroma is the commonest benign tumour of the oral cavity reporting to the referral government hospital at Miraj in Maharashtra state.

**Keywords:** Benign oral tumour, fibroma, oral cavity, soft tissue lesion, histopathology.

### Introduction

Oral cavity is vulnerable to many types of epithelial, mesenchymal, salivary and haematolymphoid tumors.<sup>[1]</sup> True tumours of connective tissue in the oral cavity also equated with soft tissue tumours are generally uncommon and are most commonly benign in nature. These soft tissue tumours are usually classified based on their differentiation.<sup>[2]</sup> Fibroma, papilloma, granular cell tumour, lipoma, pleomorphic adenoma, haemangioma and neurofibroma are some of the oral benign tumors.<sup>[3]</sup> Fibromas are the common reactive lesions in the oral cavity. The epithelial precursors in the oral cavity usually present as leukoplakia, erythroplakia or mixed lesions that may undergo malignant transformation. Majority of the malignant oral cancers are of squamous cell type.

Many of the benign tumours of oral cavity may exhibit similarities in clinical and radiographic characteristics and may resemble malignant lesions.<sup>[4]</sup> Clinicians and dental surgeons should have a perceived knowledge of clinical and demographic characteristics which are associated with these versatile benign oral tumors. Histopathological analysis is an important tool to establish a definitive diagnosis. This study describes the frequency and histopathological profile of various oral benign tumours presenting to a medical college hospital.

### Materials and Methods

The histopathological reports of patients with oral lesion were reviewed retrospectively for a period of five years from 2008 to 2013 maintained in the department of pathology in a government medical college hospital at Miraj in Maharashtra. Information was available of 642 oral lesions and those which were suggestive to be of benign origin were identified. The age, sex, site of the oral lesion and relevant clinical information of these patients were recorded in a structured proforma. Tumours of odontogenic origin, bone, oropharynx and nasopharynx were excluded for analy-

#### \*Corresponding Author

Dr. Smita S Masamatti  
No. 14, Staff Quarters, Sapthagiri Hospital,  
Chikkasandra, Hesarghatta Main Road,  
Bengaluru-560090  
E-mail: [smitamas@yahoo.co.in](mailto:smitamas@yahoo.co.in)  
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sis of the lesions. Based on the histopathological descriptions available in the reports these oral tumours were grouped under the four categories of benign epithelial lesions, soft tissue tumors, minor salivary gland tumors and tumors of undetermined origin. The histopathological types are summarized and described according to age, sex, and site in the oral cavity. The data was entered manually in a spread sheet for analysis.

**Table 1.** Type of oral lesions and distribution of benign oral tumours

Characteristics of oral lesions (n=642)	No.	(%)
Malignant tumours	330	51.4
Inflammatory lesions	117	18.2
Tumour like lesions	95	14.8
Benign tumours	70	10.9
Epithelial precursors	30	04.7
<b>Sex distribution of patients with benign oral tumours (n=70)</b>		
Male	33	47.2
Female	37	52.8
<b>Age distribution of benign oral tumors (n=70) Range=3 to 70 years</b>		
<20	13	18.6
20-40	40	57.1
>40	17	24.3

## Results

The histopathological characteristics of the 642 oral biopsy specimens are described in table 1 and is predominated by malignant tumors (51.4%). Seventy (10.9%) of the biopsy specimens were diagnosed as benign tumours. Among these benign tumours, fibromas was the predominant histopathological variety (48.6%), followed by squamous papilloma variety (28.6%). The distribution of these benign tumours were found to be more common in the fourth (38.6%) followed by the third (18.6%)

decade of life. The commonest sites of the oral benign tumours were in the buccal mucosa (44.3%) followed by the gingiva (30%). Fibroma was the commonest histopathological type among the gingival benign tumours (95.5%) whereas the squamous papilloma variety predominated among the tumours presenting in the buccal mucosa (48.4%). Haemangioma (45.5%) followed by squamous papilloma (36.4%) predominated the benign tumours of the tongue. In this series of histopathological report lipoma, neurofibroma, pleomorphic adenoma and granular cell tumor were identified as uncommon tumours and constituted to 11.4% of the total benign tumours.

**Table 2.** Histopathological types of benign oral tumours and their sites

Site	SP	Fibroma	Haemangioma	Lipoma/NF/PA/GCT	Total
Buccal mucosa	15	9	3	4	31
Gingiva	-	21	-	1	22
Tongue	4	1	5	1	11
Hard palate, Lip and FOM	1	3	-	2	06
<b>Total</b>	<b>20</b>	<b>34</b>	<b>08</b>	<b>08</b>	<b>70</b>

## Discussion

Fibromas was the predominant histopathological variety (48.6%), followed by squamous papilloma variety (28.6%) among the benign oral tumours in this study. Benign tumours comprised of 19.4% of all oral tumours in this study which is comparable with studies done elsewhere which found rates of 16.5%<sup>[1]</sup> and 23.2%.<sup>[5]</sup> Squamous papilloma was the most common benign epithelial lesion 28.6%. Such similar findings are found in similar other studies.<sup>[6,7]</sup> However pleomorphic adenoma, haemangioma and lipoma are found to be the most common benign tumours in some studies.<sup>[9,10]</sup> Lipoma and Haemangioma were the most common benign lesions. Generally lipoma and haemangioma are the most common benign soft tissue tumours of oral

cavity in adults and children respectively.<sup>[11]</sup> The distribution of these benign tumours were found to be more common in the fourth (38.6%) followed by the third (18.6%) decade of life. Studies have reported occurrence of benign oral tumours in different age group including second and sixth decade of life.<sup>[1,10,11]</sup> The commonest sites of the oral benign tumours were in the buccal mucosa (44.3%) followed by the gingiva (30%). One study reported lips as the commonest site <sup>[10]</sup>, whereas another<sup>[9]</sup> reported palate, tongue and upper lip as the commonest sites.

### Conclusion

Knowledge of benign oral lesions in terms of frequency and presentation is beneficial for clinicians in its diagnosis and management. Histopathology is an important early diagnostic tool for diagnosis of oral benign tumours.

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