

ORIGINAL RESEARCH ARTICLE

SPECTRUM OF ORAL LESIONS IN A TERTIARY CARE CENTRE OF NEPAL

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ABSTRACT

Background: Lesions in the oral cavity may be of variety of types. Their trends are also increasing day by day. The aim of the study was to determine the spectrum of oral lesions reporting at the tertiary care center in Nepal.

Methods: A retrospective study was conducted among from the medical records among the samples sent for biopsy from the department of Oral and Maxillofacial Surgery at KIST Medical College from a period of 2008 to 2017 AD. The data was entered into excel and transferred into SPSS version 16 and analyzed using descriptive statistics presented in the form of table.

Results: A total number of 84 cases were include into the study. Age of the patients were ranged from 7 to 87 years. Oral mucosa was the most common site followed by tongue. The most common lesion reported was pyogenic granuloma followed by well differentiated oral squamous cell carcinoma.

Conclusions: The majority of the oral cavity lesions are diverse in nature. All lesion especially in the oral cavity should be biopsied to rule out malignancy. Diagnosis of any of these rare lesions is important from the management point of view.

INTRODUCTION

The oral cavity is affected by a wide range of lesions with diverse origins and characteristics. They arise due to the exposure to a variety of injurious and carcinogenic agents and may range from benign or malignant lesions.¹ These oral and maxillofacial lesions are generally diagnosed by either clinical or radiographic examinations; however, the final and appropriate diagnosis is dependent upon histopathological examinations and availability of the oral pathologists in any center.¹⁻³

The biopsy results facilitate the practitioner to get detailed impression and the diagnosis of the various oral and maxillofacial lesions processed at pathology service. The dental clinicians need to recognize these conditions to diagnose the patients accurately.^{4,5} However, in many situations, many oral lesions are misdiagnosed or neglected due to inexperienced examiner, lack of awareness of going to certified practioner or inability to refer the patient to qualified professionals. Various studies have shown variations in prevalence of these oral lesions in different populations, ethnicity and locations in the oral cavity.^{2,6-8}

Literatures related to frequency and prevalence of such lesions

in a way increase the knowledge of disease patterns within the populations but also help the dental practitioners. Studies pertaining to the prevalence of oral cancer and precancerous lesion have been reported in Nepal,⁹ however, study related to the histopathological based spectrum of oral lesion is scarce Nepal.^{10,11} This study was carried out to assess the spectrum of oral lesions in the tertiary care center of Nepal.

METHODS

A retrospective study was conducted in the Department of Oral and Maxillofacial Surgery of KIST Medical College from 2008 to 2017 AD. The ethical approval was acquired from KIST Medical College Institutional Review Committee (2073/74/7).

All the records sent from Department of Oral and Maxillofacial Surgery to the Department of Pathology for histopathological examinations, were recorded in a proforma. The parameters analyzed in the study included age, gender, site and histopathological diagnosis of the lesions. Patients with lesion in oral cavity and oropharynx, undergoing biopsy or surgical treatment at tertiary health care center were included in the study while all lesions involving only teeth were excluded from the study. H&E slides were re-stained and

reviewed independently by general pathologists. The data were coded and entered in SPSS 16. The data were analyzed using descriptive statistics and presented in the form of Table.

RESULTS

There were 39 (46.4% females and 45(53.6%) males. The median age of the patients was 33 (Q1=23.3, Q3=54.3) with age range of 7 to 87 years. The sites were oral mucosa in 19(22.6%), tongue in 17(20.2%), gingiva in 12(14.3%), buccal mucosa in 10(11.9%) cases followed by lip, mandible, soft palate, maxilla and hard palate respectively (Table 1).

Table 1: Site of lesion in the oral cavity

Sites of oral cavity	Frequency (%)
Oral mucosa	19 (22.6)
Tongue	17 (20.2)
Gingival	12 (14.3)
Buccal mucosa	10 (11.9)
Lip	8 (9.5)
Mandible	8 (9.5)
Soft palate	5 (6.0)
Maxilla	3 (3.6)
Hard palate	2 (2.4)

Pyogenic granuloma was the most frequent lesions observed 13(15.5 %) followed by well differentiated squamous cell carcinoma 8 (9.5%) (Table 2).

Table 2: Type of lesions

Lesions	Frequency(%)
Pyogenic granuloma	13 (15.5)
Well differentiated squamous cell carcinoma	8 (9.5)
Fibrous epulis	7 (8.3)
Lichen Planus	5 (6.0)
Fibroma	5 (6.0)
Moderately differentiated squamous cell carcinoma	5 (6.0)
Nonspecific inflammation	4 (4.8)
Hemangioma	4 (4.8)
Ossifying fibroma	4 (4.8)
Fibroepithelial Polyp	3 (3.6)
Pleomorphic adenoma	3 (3.6)
Granulation	2 (2.4)
Adenomatoid odontogenic tumor	2 (2.4)
Ameloblastoma	2 (2.4)
High grade dysplasia	2 (2.4)
Hyperkeratosis without dysplasia	2 (2.4)
Leukoplakia	2 (2.4)
Mucocele	2 (2.4)
Basal cell carcinoma	1 (1.2)
Cemento-ossifying fibroma	1 (1.2)
Juvenile Ossifying Fibroma	1 (1.2)
Mild dysplasia	1 (1.2)
Monomorphic adenoma	1 (1.2)
Nasopalatine cyst	1 (1.2)
Peripheral giant cell granuloma	1 (1.2)
Radicular cyst	1 (1.2)
Retention cyst	1 (1.2)

DISCUSSION

This study was done to assess the type of lesions and their distribution in the oral cavity among the biopsy specimen received in general pathology lab at KIST Medical College. The study was done retrospectively from 10 years old medical record to identify the common oral lesions thus reported.

Studies have shown great variation on the prevalence of oral lesions related gender. While few studies have shown higher prevalence of oral lesions in males,^{6,10,12} others have reported either equal or higher prevalence in females.^{2,3} Among the obtained samples the more than half 45(53.6%) belonged to males. This was also similar to the study reported by Saravani et al.¹³

Most of the studies have reported the prevalence of oral lesions in pediatric populations.^{8,14,15} In the present study, the oral mucosal lesions were observed from age 7 to 87 years. The difference signify that these lesions are not limited to specific age group.

Some of the lesions in oral cavity are site specific. On the basis of site of involvement, the oral mucosa was the most reported sites for oral lesions followed by tongue and gingiva in the present study. Literatures have shown variations even in the specific sites too.^{4,9,16} However, our results of this was similar to the study performed by Tariq et al.⁴ Studies related to oral cancers done in Nepal have reported tongue as the most common site for oral squamous cell carcinoma,¹¹ while Dixit et al have shown buccal mucosa as the most common site for the oral cancer followed by tongue.¹⁰

Among the studied samples pyogenic granuloma was found in 13 (15.5%) followed by well-differentiated squamous cell carcinoma in 8(9.5%) and fibrous epulis in 7(8.3%). Study done by Sharma et al have shown ulcero-proliferative growth as commonest findings.¹ In another study Saleh et al have shown. malignant neoplasm was most common findings.²

Oral cavity is easily accessible to clinical examination, so early diagnosis of all lesions and disease can be detected much easily. Our study showed 14 cases of malignant lesions which is significant to show malignancy persisted 11 percent of overall various tissue sample.

There have been few studies been published in the literature related to the histopathological findings of oral mucosal lesions in Nepal.^{10,11} Gajural et al have reported the trends of oral squamous cell carcinoma in their study¹¹ while another study,¹⁰ have reported head and neck cancer in their study. Prevalence based study reported till date have only focused in oral cancer or precancerous conditions.⁹ However, this study had been able to show the trends of all biopsied oral mucosal lesions reported to the institute for a period of ten years. The reported samples were less in the center. This may be also pinpoint to the number of histopathological investigations performed, number of patients seeking medical advice on oral lesions and a smaller number of oral pathologists.

Specialties like Oral and Maxillofacial surgery and Oral Pathology has been very limited in Nepal. Clinical examination being a

tool just to diagnose the condition, often need pathological observation and justification. The paucity oral pathologists and of oral and maxillofacial pathological services needs to be recognized as well.¹⁷ Most of the tissue examinations of oral lesions are performed by general pathologist and the result may vary depending upon the expertise and capability of the pathologist. Many of these biopsies are tenses with diagnostic dilemma and may be challenging, usually due to inadequate clinical information, an unfamiliarity with anatomic landmarks and/or terminology used by the submitting physician or dentist, limited size of the sample. A clinical description and history to accompany the submitted biopsy is often essential to the proper diagnosis and subsequent treatment of many oral conditions. A clinical history is a requirement recognized by the College of American Pathologist (CAP).¹⁸

All Health professionals need to play a vital role in this regard. For proper management of patients, certified professionals should go hand in hand for multidisciplinary approach. The tertiary care health facility data on biopsy can furnish the necessary information to the dental practitioners and further it can help to establish the oral pathology service in these health centers. In the context of Nepal, many Tertiary care facilities do not have oral pathology services. This study details the range of the oral pathological lesions, which may indicate to the need of separate oral pathology service in these centers.

It should be noted that the data from a single institution may have some limitations. It usually reflects the specific patient population reporting to the hospital rather than the community as a whole.

CONCLUSION

From the present study it was observed that majority of the oral cavity lesions are diverse in nature; however, malignant lesions are reported in greater frequency. All lesion especially in the oral cavity should be biopsied to rule out malignancy. Diagnosis of any of these rare lesions is important from the management point of view.

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CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None

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