

Histopathological Evaluation of Oral Lesions in Patients presenting at SMCH

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ABSTRACT

Objective: To assess the frequency of various lesions in oral cavity, maxilla and mandible.

Methodology: The study was conducted at Pathology Department of Sharif Medical and Dental College and Sharif Medical City Hospital, Lahore. One hundred and seven cases of different lesions in oral cavity, maxilla and mandible diagnosed on incisional/excisional biopsy from 2013-2016 were included in this study. The biopsy specimens were processed and the slides prepared were stained with H&E stain.

Results: The mean age of the patients was 41 ± 17 years. Pyogenic granuloma was the most frequent reactive lesion. Other frequent benign lesions were Ameloblastoma and odontogenic cysts, whereas the most frequent malignant tumor of the oral cavity was squamous cell carcinoma.

Conclusion: It is concluded that the most common benign lesions that arise in our population in the oral cavity are pyogenic granuloma and odontogenic cysts. The most common malignant tumor arising in the oral cavity is squamous cell carcinoma.

Keywords: *Pyogenic granuloma. Odontogenic cyst. Squamous cell carcinoma. Ameloblastoma.*

INTRODUCTION

The oral cavity is the most common site for tumors and tumor like lesions. Among the malignant tumors, squamous cell carcinoma is the most commonly occurring lesion of the oral cavity. It occurs most commonly in middle-aged to elderly adults. Tobacco, alcohol and infection with high-risk human papilloma virus subtypes are the common risk factors. Genetic factors and immunodeficiency also increase the risk.¹ Benign lesions of oral cavity include fibroma, lipoma, schwannoma, papilloma, pyogenic granuloma and odontogenic tumors. They are treated by surgical resection and usually, they do not recur.² The most frequent benign lesion of the oral cavity is a pyogenic granuloma. It can occur in gingiva, lips, buccal mucosa, tongue and palate.³

Epithelial, odontogenic or inflammatory cysts can arise in the oral cavity. Odontogenic cysts arise from the odontogenic epithelium of the jaws. Proliferation or degeneration of epithelium can cause cyst formation.⁴ Ameloblastoma is a benign odontogenic tumor. There are chances of recurrence. Its prognosis depends upon microscopic findings.⁵ Pleomorphic adenoma is the most common benign tumor of salivary glands. It may occur in the paranasal sinuses, nasal cavity, larynx and parotid gland. Most common site in the oral cavity is the

hard and soft palate. After adequate surgical excision, the tumor does not recur.⁶

The incidence of a malignant tumor is high in minor salivary glands. Among the malignant tumors of minor salivary glands, mucoepidermoid carcinoma is the most common.⁷ They have good survival rate. Tumor stage, adjuvant radiotherapy and grade are independent prognostic factors for disease-free survival. Adenoid cystic tumors have worst outlook than other tumors.⁸ The prevalence of oral cancer is higher; reaching about 10% of all cancers in Pakistan and 45% in India.^{9,10} So, this study was planned to assess the frequency of various lesions in oral cavity, maxilla and mandible.

METHODOLOGY

The study was conducted at Pathology Department of Sharif Medical City Hospital and Sharif Medical City Hospital, Lahore after approval from the ethical committee. One hundred and seven cases of different lesions in oral cavity, maxilla and mandible diagnosed on incisional/excisional biopsy from 2013-2016 were included in this study. Informed consent was taken from all patients and data like patient's age, gender, history and clinical manifestations were noted. The specimens were processed and the slides were stained with Hematoxylin and Eosin (H&E) stain.

STATISTICAL ANALYSIS

The data were analyzed by using SPSS version 21.0. The mean & standard deviation (SD) was calculated for the age of the patients. Frequency and percentages were noted for the variables like the gender of the patient and the type of the lesion. A p-value of ≤ 0.05 was considered as significant.

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RESULTS

Our study included 107 cases. The age range of the patients was 7-85 years and the mean age was 41 ± 17 years. Most of the lesions (62%) were found in the third to fifth decades of life.

Among the 107 patients, 67 (62.6%) were males and 40 (37.4%) were females. Nine (8%) cases were diagnosed as reactive lesions, 40 (37%) benign and 58 (62%) lesions were malignant.

The most frequent reactive lesion was pyogenic granuloma (4.7%) whereas the most frequent benign tumor was ameloblastoma (10.3%) (Figure 1).

Among the reactive lesions, there were 5 cases of pyogenic granuloma, 2 cases of mucocoele and 2 cases of peripheral giant cell granuloma. The incidence of pyogenic granuloma was slightly increased in females. Out of 107 cases, 21 were diagnosed as odontogenic cysts, of which the radicular cyst was most common. The age range was 14-69 years, with a maximum number of cases occurring in 18-28 years age group. There were 5 cases of fibroma, 3 in females and 2 in

males. The age range was 21-58 years.

There were 2 cases of pleomorphic adenoma arising from minor salivary glands in the oral cavity. There was one case of adenoid cystic carcinoma in 60 years old female. There was one case of osteosarcoma arising in the jaw in a 26 years old male.

The most common malignant (45.6%) tumor was squamous cell carcinoma. Out of the 49 cases, 35 occurred in males and 14 occurred in females. The age range was 22-85 years. There were 5 cases of verrucous carcinoma, of which 2 occurred in males and 3 in females. The age range was 55-70 years.

DISCUSSION

Mouth is not merely a gateway for delicacy; it is also a site of pathological oral lesions. Various neoplastic and non-neoplastic lesions can arise in the oral cavity. Identification of these lesions is important for the treatment and management of the patients. In this study, 107 different oral cavity lesions were evaluated. According to our results, the mean age of the patients

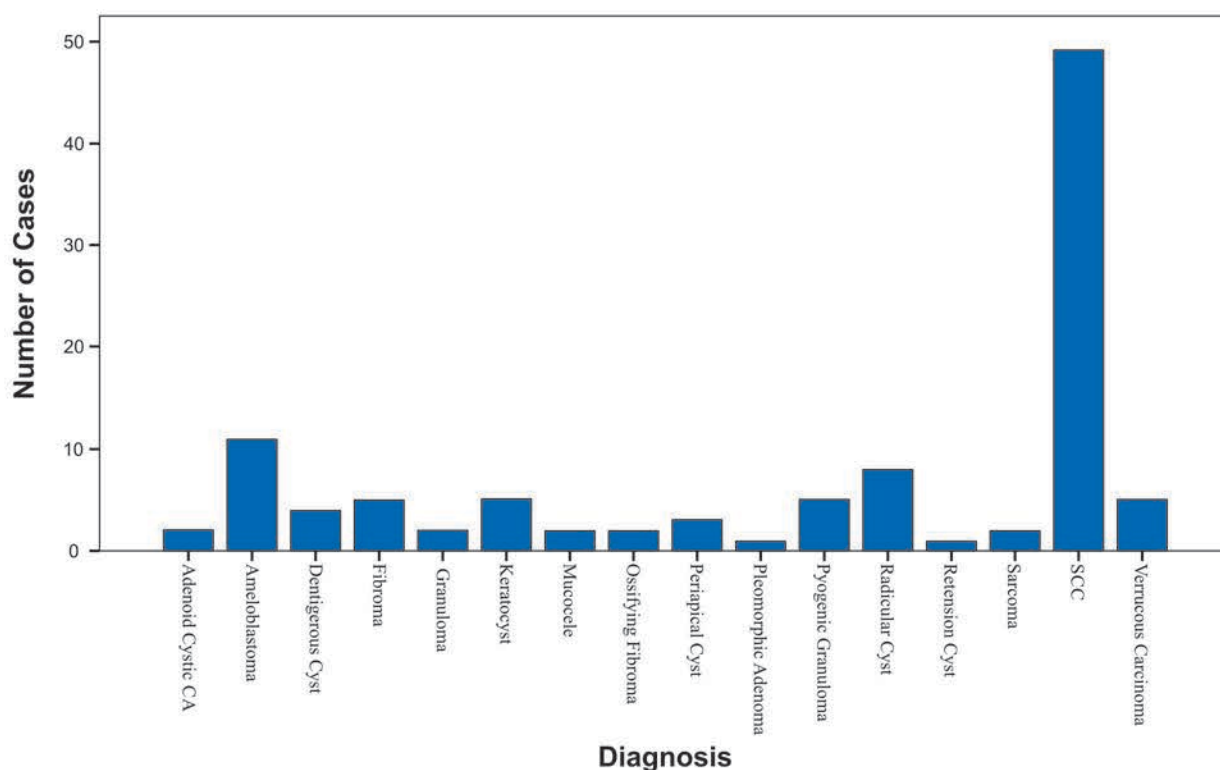


Figure 1: Bar chart showing frequency of oral lesions in study subjects

was 41±17 years. Similar results were found in another study in which they found that most of the lesions (62%) were found in the third to fifth decades of life.¹¹

In this study, gender distribution shows a slight male predominance (62.6%) as compared to females (37.4%). These results are not comparable to another study which showed female predilection as compared to males.¹¹

According to our results, nine (8%) cases were diagnosed as reactive lesions, 40 (37%) benign and 58 (62%) lesions were malignant. Among the reactive lesions, pyogenic granuloma was the most frequent reactive lesion (4.7%). The incidence of pyogenic granuloma was slightly increased in females. The age range was 10-45 years. Similar results were shown by other studies.¹¹ Another study conducted in Jordan showed that pyogenic granuloma was the most commonly occurring lesion in the 11 to 20 years old patients and females are most commonly involved.¹⁶

In our study, 21 cases of odontogenic cysts were diagnosed, out of which the radicular cyst was the most common. The age range was 14-69 years, with the maximum number of cases were reported in 18-28 year age group. Comparable results were found in a study conducted by Monor et al. In 2012.⁴

Our study showed that 37% lesions were benign and the most common benign tumor was ameloblastoma (10.3%). Comparable results were seen in other studies conducted in China and Africa.^{12,13}

In this study only two cases of pleomorphic adenoma were diagnosed. These adenomas arise in the oral cavity from minor salivary glands and their incidence is low. Among the malignant salivary gland tumors, there was one case of adenoid cystic carcinoma in 60 years old female. A study conducted by Pantvaidya also shows that incidence of tumors arising in minor salivary glands is low and malignant tumors usually arise in fourth to the seventh decade. Moreover, the malignant tumors have a slight female predilection.¹¹

According to our results, squamous cell carcinoma was the most common malignancy occurred in 49 patients (45.6%). Out of the 49 cases, 35 occurred in males and 14 occurred in females. The age range was 22-85 years. Another study conducted by Manjit Singh Bal also showed that Squamous cell carcinoma was the most frequently occurring oral cavity malignancy.¹⁴

CONCLUSION

The majority of oral cavity lesions were benign. The most common benign lesions that arise in our population in the oral cavity are pyogenic granuloma and odontogenic cysts. The most common malignant tumor arising in the oral cavity is squamous cell carcinoma.

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