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Oral Cavity Lesions: A Comprehensive Review

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Abstract

Introduction: Head and neck cancer is the sixth most common cancer worldwide; oral cavity being the commonest site. Various benign and malignant lesions occur in oral cavity. As per Globocon 2018, incidence of oral cancer is 7.4%. This study was undertaken to evaluate clinico-pathological features of various oral cavity lesions seen in our hospital.

Materials and Methods: This study was conducted over a period of 14 months (June 2022-July 2023) which included all the histopatholgically diagnosed cases of oral cavity lesions. Detailed clinical and histopathological features of these cases were analyzed.

Results: The study comprised of 102cases (Males-74,female-28) belonging to age range of 20-90yrs , mean age being 56 years. Majority,32(31.3%) belonged to 51-60years. Majority,92 (90.1%) cases had malignant and 8(9.9%) had benign lesion. Commonest site of malignant lesion was tongue seen in 44(43.1%) cases, followed by buccal mucosa, 29(28.4%) and hard palate 19 (18.6%). Squamous cell carcinoma was the most common histopathological type, seen in 89,96.7% of 92 cases followed by malignant salivary gland tumors in 3(3.3%) cases.

Discussion: The commonest age group of oral cancer was observed to be 51-60 years with tongue being the commonest site and squamous cell carcinoma was the commonest histopathological type which corroborate with the findings of others.

Conclusion: Oral cavity lesions are frequently asymptomatic, so can be missed clinically. Early and accurate histopathological diagnosis of various oral lesions are essential for prevention of morbidity and mortality.

Keywords: Oral cavity lesions, Benign, Squamous cell carcinoma, malignant, histopathological

Introduction

Head, and neck cancer is the sixth most common cancer in the world. As per Globocon 2018 data, oral cavity cancer (OCC) is the most common cancer in males in South-East Asia. The incidence rate is 7.4% in 100,000 populations, with a mortality rate accounting for 6.7% in

100,000 populations. The disease burden is increasing at an alarming rate in developing Southeast Asian countries. The majority of the cancers that occur in the oral cavity are oral squamous cell carcinomas (OSCC) arising from the squamous epithelial lining of buccal mucosa, tongue, the floor of mouth, palate, and lip. This study aims at evaluation of the clinical and histomorphological features of various oral cavity lesions seen in our tertiary care hospital.

Material and Method

This study was conducted in our tertiary care hospital over a period of 14 months (June 2022 to July 2023). All the cases opined as oral cavity lesions on histopathological examination of various biopsy specimens were included. A detailed clinical and histopathological features of these cases were analyzed.

Result

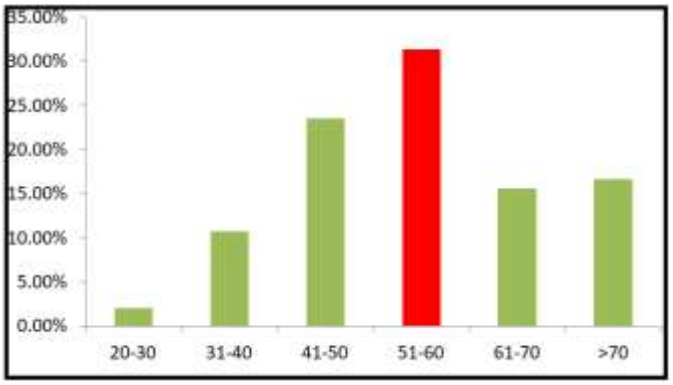
This study comprised of 102 cases [Male-74(72.5%), female- 28(27.4%)] having clinical suspicion of oral cavity lesion and subsequently confirmed on histopathological examination of biopsy specimens. Table -I depicts the different types of biopsy specimens. Out of these 102cases, 63(61.7%) cases were opined on small biopsy and 39(38.2%) cases underwent wide excision.

Table 1: Different Types of Biopsies Specimens (N=102)

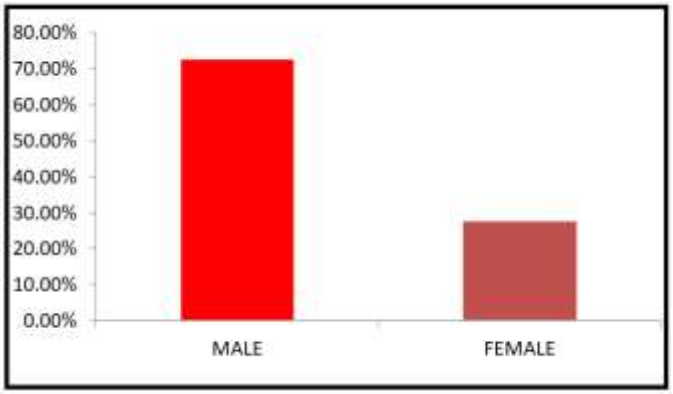
Sn.	Type of procedure	Number of cases(%)
1	Wide excision	39(38.2%)
2	Biopsy	63(61.7%)
	Total	102(100%)

Graph 1 shows the age wise distribution of oral cavity lesions. The age range of these cases was found to be 20-90 years with the mean age of 56.1years. Maximum number of patients, 32, 31.3% out of 102 cases were found in 51 to 60 years' age followed by 24, 23.5% cases in 41-50 years. There were 17, 16.6% cases in the age group of more than 71 years, 16(15.6%) cases in the age group 61-70 years,11,10.7% cases in age group of 31-40years and 2,1.96% cases in age group of 20-30 years. Graph 2 shows gender wise distribution of oral cavity lesions.

Graph 1: Age Sex Wise Distribution of Oral Cavity Lesions

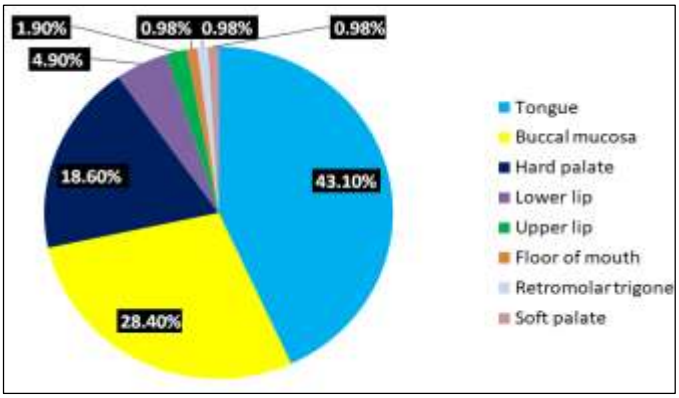


Graph 2: Gender wise Distribution of Oral Cavity Lesions



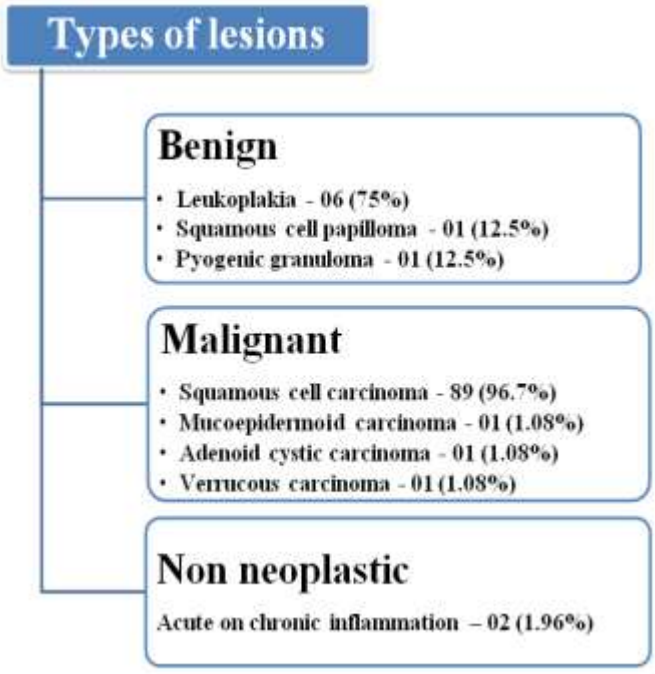
Graph 3 depicts the site wise distribution of oral cavity lesions. Majority, 44(43.1%) had lesion in tongue, followed by 29(28.4%) involved buccal mucosa, 19 (18.6%) involved hard palate, 5(4.9%) involved lower lip, 2(1.9%) involved upper lip, followed by floor of mouth 1(0.98%), retro molar trigone 1(0.98%) and soft palate 1(0.98%).

Graph 3: Site Wise Distribution of Oral Cavity Lesions (N=102)



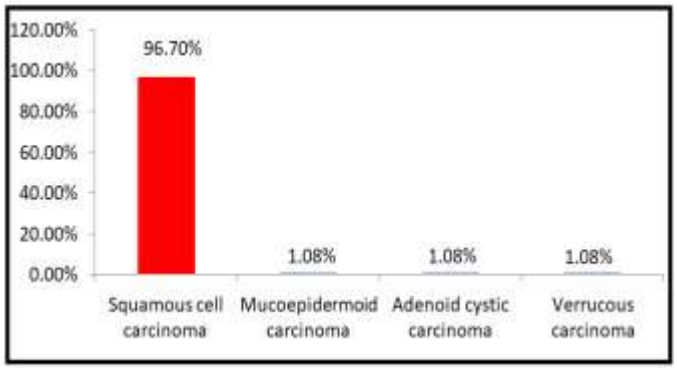
Out of these 102 cases, majority had malignant neoplasms as seen in 92 (90.1%) cases and 8 (7.84%) had benign and 2(1.96%) cases had non-neoplastic disease. This is depicted in Graph 4

Graph 4:

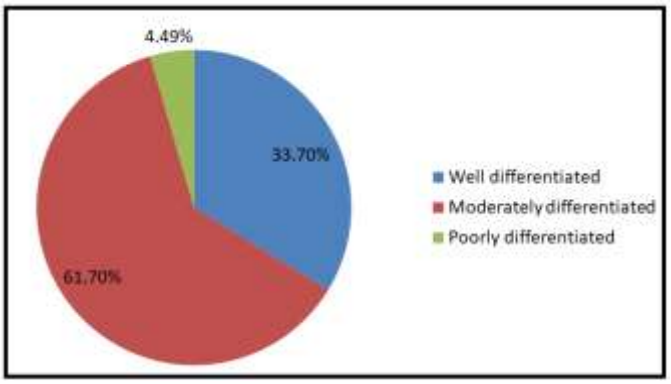


Graph 5 depicts the different histomorphological patterns of malignant oral cavity neoplasms seen in total cases. Out of 92 cases with malignant neoplasms, maximum number, 89(96.7%) revealed squamous cell carcinoma followed by mucoepidermoid carcinoma, Adenoid cystic carcinoma and verrucous carcinoma each seen in 1(1.08%) cases. Among 89 squamous cell carcinoma cases, maximum 55(61.7%) were moderately differentiated followed by 30(33.7%) well differentiated and 4(4.49%) poorly differentiated cases. (Graph 6)

Graph 5: Histomorphological Patterns of Malignant Oral Cavity Neoplasms



Graph 6: Squamous Cell Carcinoma Types Distribution



Gross Appearance of Oral Cavity Neoplasms

Figure 1: Gross image of right hemimandibulectomy specimen showing tumor

Figure 2: Cut section of hemiglossectomy specimen showing the tumor.

Microscopic Appearance of Oral Cavity Lesions

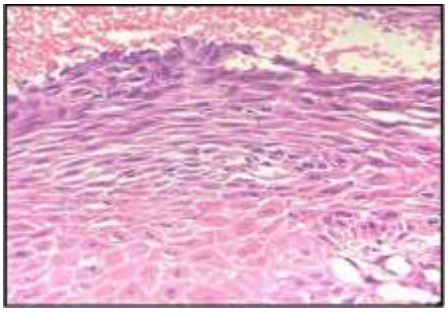


Figure 3: Leukoplakia (400X)

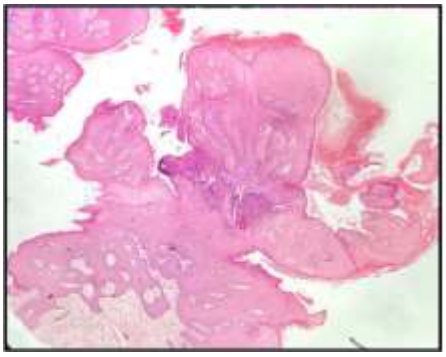


Figure 4: Squamous cell papilloma (100X)

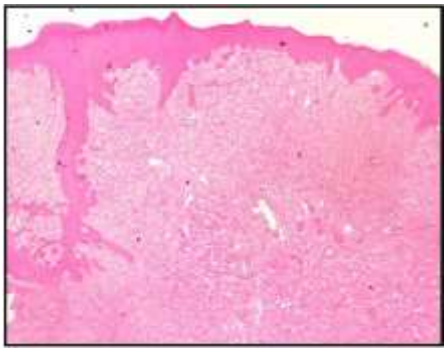


Figure 5: Pyogenic granuloma(100X)

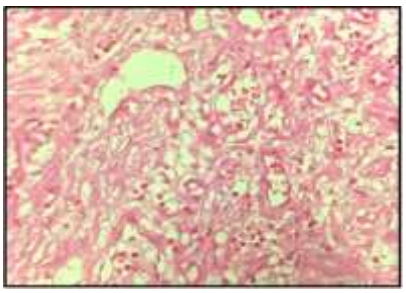


Figure 6: Pyogenic granuloma (400X)

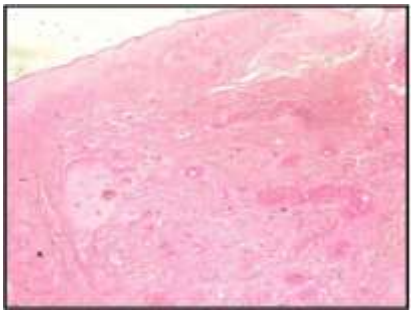


Figure 7: Squamous cell carcinoma(100X)

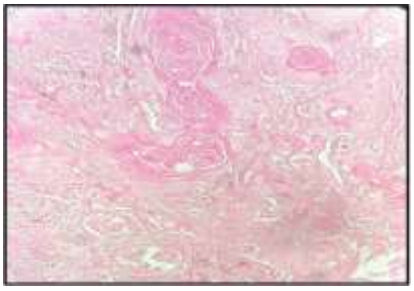


Figure 8: Well differentiated(100X)

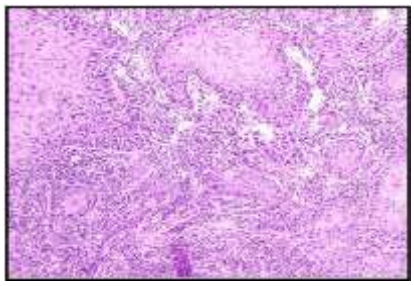


Figure 9: Moderately differentiated(100X)

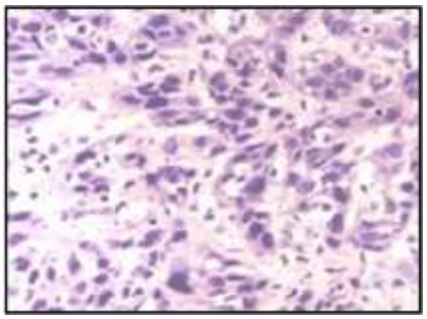


Figure 10: Poorly differentiated (400X)

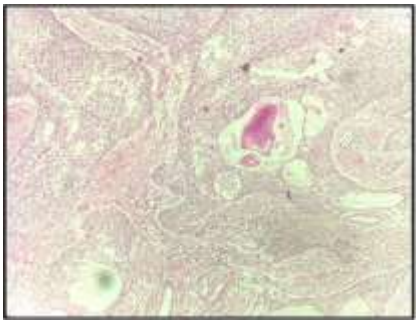


Figure 11: Mucoepidermoid carcinoma(100X)

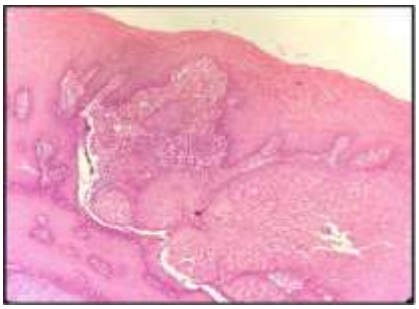


Figure 12: Verrucous carcinoma(100X)

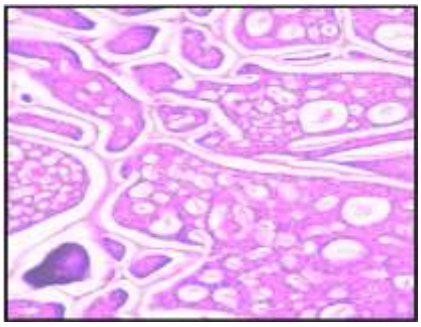


Figure 13: Adenoid cystic carcinoma(100X)

Discussion

In this study, oral cavity lesions was observed in age range of 20- 90 years, with a median age of 56 years which is similar to study by Bastakoti S et al. who observed oral cavity lesions in 20-93 years with a median age of 55.9 years. The most common histomorphological pattern in our study was squamous cell carcinoma seen in 89(96.7%) out of 102 cases, but Bastakoti S et al. observed squamous cell carcinoma in, 453(95.5%) out of 851 cases. Patro P et al. had reported squamous cell carcinoma in 31 (39%) cases out of 80 cases. In our study, moderately differentiated squamous cell carcinoma is seen in 55(61.7%) cases but in Owais G et al. 9 (22.5%) are moderately differentiated squamous cell carcinoma out of 200 cases. In our study, maximum cases involved tongue 44(43.10%) but inModi et al. 32(26.8%)cases involved buccal mucosa out of 119 cases.

Conclusion

Oral cavity lesions are frequently asymptomatic to begin with and so can be missed clinically hence the timely and accurate identification of various oral lesions becomes vital for prevention of morbidity and mortality. Owing to the rising prevalence and incidence of oral malignancies, importance of oral hygiene with routine checkups, spectrum of oral lesions seen and their precise time bound diagnosis should be emphasized upon in society. Histopathological examination is still the gold standard for confirmation. The nature and the origin of oral cavity lesions cannot be determined by clinical examination alone.

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