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HISTOPATHOLOGICAL SPECTRUM OF ORAL CAVITY LESIONS.

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ABSTRACT

Introduction: The oral cavity is one of the commonest sites for neoplastic and non-neoplastic lesions andis usually asymptomatic.Oral cancer is most common in developing countries, and hence it is essential to examine precancerous lesions of oral cavity meticulously as they potentially develop into carcinomas.Proper management of patients begins with an accurate diagnosis, and histopathology is considered as the gold standard.

Objectives: This was undertaken to study the spectrum and pattern of various oral cavity lesions.

Material and Methods: A one and half year prospective study from September 2018 to March 2020 carried out in a Department of ENT Head and neck surgery, Alluri Sitarama Raju Academy of Medical Sciences, Eluru. The study included 62 cases of oral cavity lesions

Result: A total of 62 cases were studied. 59% malignant lesions(73% squamous cell carcinoma), 13.6% benign neoplasms ,27.2% premalignant epithelial lesions and 29% non-neoplastic lesions. Squamous cell carcinoma & its precursor lesions had a strong association with tobacco consumption. The oral lesions are common among males with tongue and buccal mucosa being the commonest site.

Conclusion: Good clinical examination, combined with an accurate histopathological study, is essential to confirm the nature of the lesion and is critical for rational management, thus avoiding mutilating surgery.

KEYWORDS : Neoplastic and non neoplastic lesions in oral cavity.

INTRODUCTION:

The oral cavity extends anteriorly fromthe mucocutaneous junction of the lips (the vermilion border)and to the junction of hard and soft palate above and line of circumvallate papillae on dorsal tongue below; communicates freely with oropharynx posteriorly.[1] The oral cavity contains lip, gingiva, teeth, buccal mucosa, maxillary and mandibular arches, retromolartrigone, tongue, the floor of the mouth, and hard palate. The oral cavity is one of the most common sites for various neoplastic and non-neoplastic lesions. Most of them are asymptomatic. Among the malignant lesions, squamous cell carcinoma is the most common lesion of the oral cavity. The association between tobacco chewing and cigarette smoking with squamous cell carcinoma has been proven. Among the benign lesions, inflammatory/ reactive lesions, pyogenic granuloma, fibroma, lipoma,mucocele, nevus, etc. are commonly observed in oral lesions.

Aims and objectives: This study is to analyze the cases of oral lesions, to study the prevalence of different types of benign & malignant lesions, to highlight precancerous lesions of the oral cavity, and to detect the various risk factors associated with oral cancers and precancerous conditions.

MATERIALAND METHODS:

A prospective study over a period ofone and half years, which included 62 cases, which was conducted in Alluri Sitarama Raju Academy of Medical Sciences, Eluru. The various parameters like age & gender of the patients, risk factorsassociation, location of lesions, and histopathological diagnosis of tissue specimen were studied. Tissue specimen consisted of incisional & excisional biopsy.Histopathology sections were processed by routine paraffin embedding method and stained by Hemotoxylin and Eosin.

RESULTS: In the present study total number of 62 lesions of the oral cavity were included (n=62), out of which 18(29%) cases belong to non-neoplastic lesions, and neoplastic lesions are 44 (70.9%) cases. Neoplastic lesions are further divided into benign, premalignant, and malignant lesions. Out of 44 neoplastic lesions, 26 cases of malignant lesions (59%) followed by cases of premalignant lesions 12(27.2%) and 6 cases of benign lesions(13.6%). In the present study, oral lesions were seen predominantly in males (68%) than females (31%). Most of the cases had a habit of smoking, chewing tobacco, and alcohol consumption (Table:2). In non-neoplastic lesions, the majority of cases were seen in the age group of 0-10 years and 21-30 years, while predominantly benign, premalignant, and malignant lesions were seen in the age group of 51-60 years,41-50 years and 31-40years (Figure:1).The tongue and buccalmucosa were common sites involved by oral lesions. The commonest site involved in non-neoplastic lesions was the buccal mucosa. Amongst neoplastic lesions, buccal mucosa was predominantly involved in both benign lesions and premalignant lesions, while the tongue was more commonly affected in malignant lesions (Figure: 2). Inflammatory papillary hyperplasia was the most common non-neoplastic lesion. In neoplastic lesions, hemangioma,followed by squamous papilloma were predominant in benign lesions, while mild dysplasia was observed in premalignant lesions. Squamous cell carcinoma accounts for 73% of total oral cavity lesions. (Table:1)

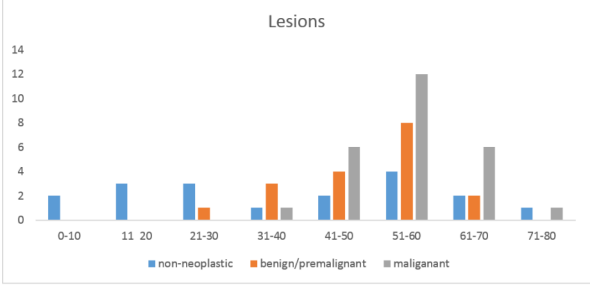

Figure: 1: Distribution of the non-neoplastic and neoplastic oral lesions in different age groups.

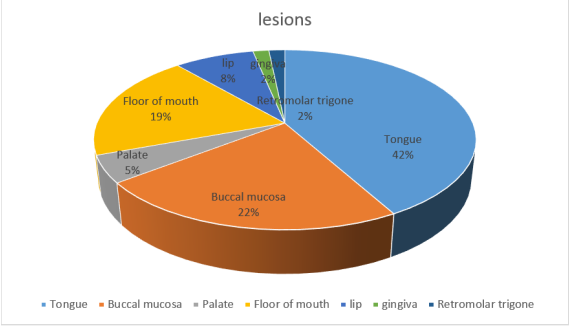

Figure: 2: Site distribution of oral lesions

Table:1: Types of oral cavity lesions

	Oral lesions	No. of lesions
Non neoplastic lesions	Inflammatory papillary hyperplasia	7 (11.2%)
	Mucocele	5(8%)
	Fibroma	3(4.8%)
	Mucous retention cyst	3(4.8%)
Benign lesions	Hemangioma	4(6.4%)
	Squamous papilloma	2(3.2%)
Premalignant	Mild dysplasia	6(9.6%)
	Submucosal fibrosis	4(6%)
	Leukoplakia	2(3.2%)
Malignant lesions	Squamous cell ca.	19(30.6%)
	Mucoepidermoid ca.	4(6.4%)
	Adenoid cystic ca.	3(4.8%)
Total		62

Table:2: Risk factor association

Habits	Malignant lesions n=26	Premalignant lesion n=12
Tobacco chewing	13(30.7%)	06(50%)
Smoking	07(26.9%)	04(33%)
Smoking + Alcohol	03(11.5%)	02(16.6%)
Nil	03(11.5%)	

DISCUSSION:

Out of 62 cases, 18(29%) cases were of non-neoplastic lesions, while 44(70.09%) cases were of neoplastic lesions. In this study, it was observed that maximum cases of non-neoplastic lesions observed have lied between the age group of 0-10 years and 21-30 years that was further followed by the age group of 31-40 years. A study was done by R Laishramet al[2], Khan Y et al[3] and Singh Manjit et al[4]all these cases were found with non-neoplastic lesions that were in their third decade while with BhalekarS et al[5] maximum cases with an age group of 31-45 years The neoplastic lesions are classified into benign, premalignant and malignant lesions. In the present study, benign lesions were seen most commonly in the 5th and 6th decade (2%), however other studies like Al-Khateebet al[6], Kadeh, et al[7]. showed the occurrence of benign lesions in the 2nd to 4th decade. R Laishramet al[2].and R Agarwal et al[8].showeda maximum number of cases in the 3rd and 4th decade. In the present study, premalignant lesions were noticed in 31-40 years of the age group, which was comparable with a study done by BhalekarS etal[5](31-45 years). The other studies such as Gupta M et al[9], S Selvi et al[10], and S Jagtap et al[11] showed maximum incidence in the age group of 41-50,40-60 and 50-59, respectively. Malignant lesions from the present study were seen in 41-50 years and 51-60 years age group. The present study is in concordance with the study done by BhalekarSet al[5], R Agarwal et al[8] in which maximum incidence of oral malignant lesions was seen in the age group of 46-60 years, while a study of D Prasan[12]and R Laishram et al[2] showed maximum malignant oral lesions lied in the age group of 61-70 years. Our study showed male dominance in both non-neoplastic and neoplastic lesions of the oral cavity. The findings were similar to study done by Khan Y et al[3]of non-neoplastic lesions, while findings of M Gupta et al[9] were comparable with present study for benign lesions, and M Gupta et al[9], S Masamatti et al[13]showed cases in males were more common than female cases in premalignant and malignant lesions of the oral cavity. The most common sites in the non-neoplastic lesion in our present study werebuccal mucosa(22%). However,the same as in the study of R Laishramet al[2] and BhalekarS et al[5]the commonest site for non-neoplastic lesions was the buccal mucosa. D Bajracharyaet al[14] observed that gingiva was the most common site involved for non-neoplastic lesions. The present study is in concordance with Bajaracharyaet al[14], Keche PN et al.[15], BhalekarS et al[5] however, in the study by R Laishram et al[2] gingiva was the commonest site for benign lesions of the oral cavity.Other studies such as Bhalekaret al[5], Misra et al[16], S.Jagtap et al[11] reveal the commonest site in premalignant lesions is the buccal mucosa, which is similar to the present study.The most common site involved in malignant lesions is the tongue; similar findings are observed inIype EM et al[17], Giri P et al[18], R Laishram et al[2]. The most common lesion in the oral cavity is squamous cell carcinoma (30%), which were in concurrence with the study conducted by S Masamattiet al[13], Iype EM et al[17], S Selvi et al[10], D Prasan[12]. Inflammatory papillary hyperplasia was the most common amongst the non-neoplastic lesions. BhalekarS et al[5] showed 10% of pseudoepitheliomatous hyperplasia.

CONCLUSION:

The majority of lesions of the oral cavity were initially asymptomatic, so they can be missed clinically. However, high index of suspicion in those having the habit of tobacco/betel nut chewing,reverse smoking, smoking & alcohol consumption, poor dental hygiene, dental carries with sharp tooth lead to early diagnosis. However, the origin and nature of the oral cavity lesions cannot be confirmed by clinical examination alone; hence, it is advisable to have a histopathological examination to confirm the nature of the lesion.Squamous cell carcinoma (73%) was the commonest malignant lesion with male predominance (68%) than females (31%).

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