INCIDENCE OF ORAL CAVITY LESIONS AND THEIR CLINICO-HISTOPATHOLOGICAL CORRELATION.

Rohit Mehrotra¹, Sanjay Kumar Nigam²

HOW TO CITE THIS ARTICLE:

Rohit Mehrotra, Sanjay Kumar Nigam. "Incidence of oral cavity lesions and their clinico- histopathological correlation". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 43, October 28; Page: 8223-8228.

ABSTRACT: BACKGROUND: Oral cavity lesions, are a disease of unknown etiology, endemic in India and Indian sub continent affecting mainly age group of 20-40 yrs.^{1,2} The incidence of oral cavity lesions is increasing now a days probably due to increasing use of tobacco, Pan masala and also because of better clinico histopathological diagnosis. **AIMS & OBJECTIVES:** To study incidence and possible etiology of various oral cavity lesions and to study clinical and pathological/histopathological correlation of oral cavity lesions. **MATERIAL AND METHODS:** All the cases which were related with history of chewing tobacco and pan masala were recorded. All the selected cases were subjected to scrape cytology or excision biopsy or punch biopsy and were sent for histopathological examination for diagnosis and grading. All the cases were followed for a minimum period of six months and subsequent scrape cytology and histology were done in selected cases. **OBSERVATIONS:** Maximum number of cases i.e. 45.05 % belonged to 31-40 years and again maximum number of cases i.e. 79.10% are found among males compared to females (21.90%). Most of the cases (47.5%) present with decreased mouth opening followed by ulceration on Buccal mucosa (14.3%). Most (42.85%) belongs to dysplasia grade II, followed by grade I (28.57%). Among squamous cell carcinoma most (5.5%) belongs to well differentiated SCC. The p value is < 0.001 which shows that correlation between clinical and histopathological diagnosis is highly significant. **CONCLUSION:** In present study, most of the cases were diagnosed clinically as Submucous fibrosis (57.40%) followed by Leukoplakia (17.58%). In this study histopathologically, the incidence of Dysplasia Grade II was found in 42.85% cases followed by 28.57% cases of Dysplasia Grade I. All the cases of Oral cancer were found histologically to be Squamous Cell Carcinoma. In the present study, p value for this correlation is <0.001 so we conclude that this is highly significant. **KEYWORDS:** Oral cavity lesions, Incidence, Clinico histopathological correlation.

INTRODUCTION: Oral cavity lesions are a diseases of unknown etiology, endemic in India and Indian sub continent affecting mainly age group of 20-40 yrs.^{1,2} The etiology of oral cavity lesions is obscure. An allergic reaction has been suggested as possible cause by some authors.^{3,4} The possible allergen which has been suspected common in Indian diet is chilli.⁵ It may be related to a peculiar dietary, component betel nut chewing, use of tobacco and vitamin deficiency in Indians.¹

The prevalence rate of oral cavity lesions varies from 0.2% to 0.5 % in India with higher percentage being found in southern areas of country.^{1,2} Sex ratio demonstrates male predominance.¹ The incidence of oral cavity lesions is increasing now days probably due to increasing use of tobacco, Pan masala and also because of better clinico histopathological diagnosis.

Pindborg et al. studied the disease Submucous fibrosis and Leukoplakia and defined it as 'Inciduous-chronic disease of unknown etiology' identified mainly in Indians and affecting all part of oral cavity and sometimes pharynx although occasionally preceded by and/or associated with

vesicle formation.^{6,7,8} It is always associated with juxta epithelial inflammatory reaction followed by fibroelastic changes of lamina propria with epithelial atrophy leading to stiffness of oral mucosa, causing trismus and difficulty in eating. Histologically the commonest variety of oral malignancies is squamous cell carcinoma.

AIMS & OBJECTIVES:

1. To study incidence and possible etiology of various oral cavity lesions.
2. To study clinical and pathological/histopathological correlation of oral cavity lesions.

MATERIAL AND METHODS: A total of 91 cases of oral cavity lesions were selected from ENT OPD/IPD, Rama medical College Kanpur. Only new cases of oral cavity lesions were enrolled in this study. All the cases which were related with history of chewing tobacco and pan masala were recorded and cases treated earlier by surgery or radio therapy were excluded from the present study.

All the selected cases were subjected to scrape cytology or excision biopsy or punch biopsy and sent for histopathological examination for diagnosis and grading. All the cases were followed for a minimum period of six months and subsequent scrape cytology and histology were done in selected cases.

OBSERVATIONS:

Age group (in yrs.)	No. of cases	Percentage
0-10	0	0
11-20	3	3.2
21-30	14	15.4
31-40	41	45.5
41-50	17	18.7
51-60	10	10.98
61-70	5	5.5
71 & above	1	1.1

TABLE 1: Distribution of Cases According to Age

This table shows distribution of cases according to age. Maximum number of cases i.e. 45.05 % belonged to 31-40 years followed by 18.70% in 41-50 years and least i.e. 1.1% in 71 years and above age group.

Sex	Male	Percentage	Female	Percentage
Hindu	63	69.2	7	7.7
Muslim	9	9.9	12	13.2
Total	72	79.10	19	20.90

Table 2: Incidence of Cases According to Sex

This table shows distribution of cases according to sex. Maximum number of cases i.e. 79.10% are found among males compared to females (20.90%).

Symptom	No. cases	Percentage
Burning sensation and soreness of mouth	3	3.3
Recurrent Stomatitis	3	3.3
Intolerance of chilly and spicy food	4	4.39
Excess saliva/dryness of mouth	0	0
Ulceration on Buccal Mucosa/palate	13	14.3
Painful vesicles on BM/Palate	9	9.89
Decreased mouth opening	43	47.27
Growth in oral cavity	9	9.89
Restricted tongue mobility	4	4.39
Miscellaneous (GERD & Spicy food)	3	3.3

Table 3: Incidence of Cases According to Presenting Symptoms

This table shows incidence of cases according to presenting symptom. Most of the cases (47.5%) present with decreased mouth opening followed by ulceration on Buccal mucosa (14.3%) and painful vesicles on Buccal mucosa/palate (9.89%).

Trismus	No. of cases	Percentage
Grade I	10	23.23
Grade II	28	65.12
Grade III	5	11.62
Total	43	100

Table 4: Incidence of Cases according to Gradation of Trismus (43 Patients)

This table shows incidence of trismus in cases. Most (65.12%) of the cases have grade II trismus.

HPE		No. of Cases	Percentage
Dysplasia Grade	I	26	28.57
	II	38	41.75
	III	13	14.28
SCC	Moderately differentiated	5	5.5
	Well differentiated	3	3.3
	Poorly differentiated	0	0
Verrucous lesion	Verrucous hyperplasia	3	3.28
	Verrucous CA	2	2.2
	Squamous Papilloma	1	1.1

Table 5: Incidence of Cases according to Histopathological Examination

This table shows distribution of cases according to histopathological examination. Most (42.85%) belongs to dysplasia grade II, followed by grade I (28.57%). Among squamous cell carcinoma most (5.5%) belongs to well differentiated SCC.

	Clinical diagnosis	Percentage	HPE diagnosis	Percentage
Leukoplakia	16	17.58	13	14.28
Melano/ Erythro/Ns	6	6.6	3	3.29
SMF	52	57.14	59	64.83
Lichen Planus	1	1.1	1	1.1
Candidiasis	2	2.2	1	1.1
Benign Lesion	6	6.59	3	3.29
Malignant lesion	8	8.79	11	12.8
Total	91	100	91	100

Table 6: Correlation of cases with respect to Clinical Diagnosis and Histopathological Examination

$X^2 = 2.22$

$p > 0.01$

This table shows correlation between clinical diagnosis and HPE. The p value is < 0.001 which shows that correlation between clinical and histopathological diagnosis is highly significant.

DISCUSSION: Total 91 cases were included in this study. Oral cavity plays essential role in many key bodily functions, including nutrition (mastication and swallowing) respiration and communication. The cause of oral cavity lesions can usually be identified by history and physical examination however; it is often determined definitively by histopathological examination and therapeutic response.⁹

In the present study on “A clinico-pathological study of oral cavity lesions” an endeavor has been made to find out the predisposing factors and etiology of these lesions and their relationship with clinical and histopathological presentation of lesions.

Largest number of cases of oral cavity lesions occurs between the age group of 20-40 years.¹ the present study revealed that the maximum patients were among the age group of 31-40 years. This study is in among the age group of 31-40 years. This study is in accordance to other studies done in past.¹⁰ This is mainly because these patients had chronic problem of long duration and without proper treatment to the problem.

In patient study, there is male predominance 79.10 percent cases compared to females 20.90 per cent. The higher percentage of males in our population may be attributed to the more chewing habits of pan, pan masala, betel nut, and tobacco chewing than the females.

Ramandeep S.G. et al, in their study of 451 subjects, found 266 (59%) males and 185 (41%) females.¹⁰ Our study is also in accordance with studies by other authors.¹¹ who also found oral cavity lesion predominance in males. Waldron et al, noted Leukoplakia cases in male 58.30 per cent as compared to 41.70 per cent cases in females.¹²

Another study reported almost equal incidence of oral cavity lesion in males 50.30 per cent and females 49.70 per cent.¹³ The higher incidence in males agrees with the observation of other authors.¹⁴

In this study we have seen trismus (restricted opening of mouth) in 43 out of 91 cases. We have graded them in I, II and III according to Kumar et al (2007). In our study maximum number of patients were in grade II (65.12%). This is in agreement with other authors.¹⁵who also found maximum number of patients with grade II trismus.

The findings of present study are very much in accordance with the findings of Banoczy J who observed 60.00 percent of dysplasia grade II type in the patients of oral cavity lesion.¹⁶ The present study is in agreement with this and revealed that cases of dysplasia grade II (moderate) were maximum 42.5 percent cases. The findings of present study showed a contrast with findings of other authors who have observed higher patients of grade I dysplasia 72.40 percent and 19.50 patients of dysplasia grade II.¹⁷

Vatsala M et al had found that all the oral cancers are squamous mucosal origin.¹⁸ In the present study, clinically diagnosed four cases of malignancy which on histopathological examination were found squamous cell carcinoma, is in agreement with same study.¹⁸

CONCLUSION: In present study, most of the cases were diagnosed clinically as Submucous fibrosis (57.40%) followed by Leukoplakia (17.58%) and benign/malignant growth (14.28%). In this study histopathologically, the incidence of Dysplasia Grade II was found in 42.85% cases followed by 28.57% cases of Dysplasia Grade I. All the cases of Oral cancer were found histologically to be Squamous Cell Carcinoma. In the present study, p value for this correlation is <0.001 so we conclude that this is highly significant.

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AUTHORS:

1. Rohit Mehrotra
2. Sanjay Kumar Nigam

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of E.N.T, Rama Medical College Hospital & Research Centre, Mandhana, Kanpur, U.P.
2. Professor, Department of Pathology, Rama Medical College Hospital & Research Centre, Mandhana, Kanpur, U.P.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Rohit Mehrotra
Dept. of E.N.T
Rama Medical College, Mandhana
Kanpur, 209217.
Email – sknigam@yahoo.com

Date of Submission: 14/10/2013.
Date of Peer Review: 15/10/2013.
Date of Acceptance: 21/10/2013.
Date of Publishing: 22/10/2013