Research Article

Study of correlation between risk factors and premalignant lesion of oral cavity in Indian population

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Abstract

Introduction: The association of carcinoma and of other oral lesions has been recognized for many years. These oral lesions which are in form of white plaques (leukoplakia) or bright red velvety plaques are ether present months to years prior to the onset of malignant changes. **Objective**: To study correlation between risk factors and premalignant lesion of oral cavity. **Material and Methods:** The present study has been conducted in the Department of E.N.T., S.S. Medical College and Associated G.M. Hospital, Rewa (M.P.) A total of 83 patients attending E.N.T. OPD during the study period of one year were included in the study. A detailed history was recorded and was investigated with routine blood examination, X-ray, Stool and Urine routine examination and finally biopsy, which was done-either as incisional or excisional biopsy with proper staining methods. Data analysis was done using proper statistical methods. **Results:** The maximum number of patients was in the 3rd decade of life (24.44%). Males were more commonly affected than females (M: F, 2.3:1). The most common site involved was buccal mucosa 64 cases (77.11%). The main addiction of cases was found to be tobacco chewing among 53 cases (63.86%) and association was found significant ($p<0.005$). **Conclusion:** Hence**,** younger age group with male predominance along with tobacco use were major risk factors for premalignant conditions of oral cavity.

Keywords: correlation, premalignant lesion, oral cavity.

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INTRODUCTION

Today in India 'Pouch Culture' has increased and so is the rate of oral malignancies. These oral malignancies are preceded by premalignant lesions, which if diagnosed at an early stage, treatment can be instituted and thus chances of cure will be than definitely greater. The association of carcinoma and of other oral lesions has been recognized for many years. These oral lesions which are in form of white plaques (leukoplakia) or bright red velvety plaques are ether present months to years prior to the onset of malignant changes of often present together with the carcinoma at the time of presentation. Because of this association the assumption was made that such lesions led directly to invasive carcinoma and hence were then solaces premalignant.[1] Today a variety of oral pre cancer are successfully evaluated and managed as a routine facet of oral health care, despite the inevitable controversies and differing definitions. Each of these has its own level of risk and because of the potentially fatal consequences it is extremely important for each clinical to remain knowledge able and updated on the diagnostic and prognostic feature of all pre malignancies of the (head and neck region) oral cavity.[2] It is especially important to remember that a premalignancy is not guaranteed to eventually transform into cancer, as was believed in the not too distant past. Many, in fact, only do so in a small proportion of cases. The premalignant conditions of the oral cavity are those which have got a potentialty to turn malignant in its due course if left untreated. It was only in 1967 when a International Reference Center for study of oral precancerous lesion was established by the World Health Organization. Some of these lesions have got a very close association with the local habits practiced by the people. Thus, the study was

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to highlight the association of local habits with premalignant lesion.

OBJECTIVE

To study correlation between risk factors and premalignant lesion of oral cavity.

MATERIAL AND METHODS

The present study has been conducted in the Department of E.N.T., S.S. Medical College and Associated G.M. Hospital, Rewa (M.P.) A total of 83 patients attending E.N.T. OPD during the study period of one year were included in the study. A detailed history including the age, sex, site and duration of lesions, socio-economic status of the patient, addictions etc. was elicited and recorded on the presented proforma. In all the cases details of history was recorded and was investigated with routine blood examination, X-ray, Stool and Urine routine examination and finally biopsy, which was done-either as incisional or excisional biopsy with proper staining methods. Data analysis was done using proper statistical methods.

RESULTS

Table 1: Distribution according to Type of Lesion

Type of Lesion	No. of Cases	Percentage
Leukoplakia	21	25.30
OSMF	21	25.30
Melanotic Macule	01	01.21
Chronic Non Specific Inflammation	33	39.76
Papilloma	05	06.02
Miscellaneous Condition (Actionmycosis, capillary Haemangioma)	02	02.41
Total	**83**	**100**

The table no 1 indicates that chronic nonspecific inflammation was the main lesion prevalent in 33 cases (39.76%) and next to it was leukoplakia and OSMF, both were found in equal number of cases 21 (25.30%). Miscellaneous lesions like Actinomycosis and capillary haemangioma were also found in 2 cases (2.41%).

Table 2: Distribution according to Age

Age	No. of Cases	Percentage
0-10	01	01.20
11-20	13	15.66
21-30	22	26.51
31-40	18	21.69
41-50	14	16.87
51-60	10	12.05
61-70	04	04.82
>70	01	01.20
Total	**83**	**100**

It was seen that the disease was more common in the 3rd and 4th decade of life. The maximum number of patients was in the 3rd decade of life (24.44%).

Table 3: Distribution according to Sex

Sex	No. of Cases	Percentage
Male	58	68.88
Female	25	30.12
Total	**83**	**100**

It was evident from the table 3; that incidence of lesion was 68.88% among male and 30.12% were among female indicating that males were more commonly affected than females (M: F-2.3:1).

Table 4: Distribution according to Site of Involvement*

Site of Involvement	No. of Cases	Percentage
Buccal Mucosa	64	77.11
Mandibular Mucosa and Sulcus	22	26.51
Maxillary Mucosa and Sulcus	18	21.69
Retromolar Trigone	26	31.33
Floor of Mouth	5	6.02
Tongue	22	26.51
Palate	7	8.43
Lip	3	3.61
Dilateral Involvement	53	63.86

(*Multiple response present)

It is evident from above table that the most common site involved is buccal mucosa 64 cases (77.11%) and second most common site was bilateral involvement 53 cases (63.86%) followed by retromolar trigone 26 cases (31.33%). Tongue was affected in 22 cases (26.51%).

Table 5: Distribution according to addictions among cases

Pre malignant Lesion	Addictions		
	Present	Absent	P value
Betel Nut chewers	43	40	0.06
Tobacco Chewers	53	30	<0.05*
Alcohol drinking	12	71	0.60
Smoking	13	70	0.73

(* P <0.05 Significant)

In present study main addiction of cases was found to be tobacco chewing 53 cases (63.86%) second most common addiction was betel nut chewing in 43 cases (51.81%) followed by pouch 33 cases (39.76%). Addiction to alcohol and smoking was less in present study. The association between tobacco chewers and lesion was significant. (P<0.05)

DISCUSSION

The present study has been conducted in the Department of E.N.T., S.S. Medical College and Associated G.M. Hospital, Rewa (MP) to study correlation between risk factors and premalignant lesion of oral cavity. A total of

83 patients with premalignant lesion of oral cavity attending E.N.T. OPD during the study period of one year were included in the study.

The chronic nonspecific inflammation was the main lesion prevalent in 33 cases (39.76%) and next to it was leukoplakia and OSMF, both were found in equal number of cases 21 (25.30%). Miscellaneous lesions like Actinomycosis and capillary haemangioma were also found in 2 cases (2.41%). (Table 1) The results found in relation to incidence of OSMF (23%) by Murti[3] *et al* were much lower in this study. The age incidence of premalignant lesion of oral cavity ranges from 8 years to 73 years. It was seen that the disease was more common in the 3rd and 4th decade of life. The maximum number of patients was in the 3rd decade of life (24.44%). There is a gradual decline in the number of cases with advancing age. The oldest patient in the study group is 73 years old. (Table 2) The findings were in deviation to the study done by Pindborg[4] *et al* who found it maximum in 40-49 years age group and Wahi[5] *et al* in 30-49 years. It was evident from the table 3; that out of 83 cases studied 68.88% were male and 30.12% were female indicating that males were more commonly affected than females (M:F, 2.3:1). Male predominance may be because of their more expose way of life, more outdoor activity and local habits. It may also be due to the fact that women come to hospital less frequently for treatment than men. (Table 3) The most common site involved is buccal mucosa 64 cases (77.11%) and second most common site was bilateral involvement 53 cases (63.86%) followed by retromolar trigone 26 cases (31.33%). Tongue was affected in 22 cases (26.51%). (Table 4) Our results coincides with that of Pindborg[4] and J. Phookan *et al*[6] where buccal mucosa was most commonly affected. In study main addiction of cases was found to be tobacco chewing 53 cases (63.86%), second most common addiction was betel nut chewing in 43 cases (51.81%) followed by pouch 33 cases (39.76%). Addiction to alcohol and smoking was less in present study. The association between tobacco chewers and lesion was significant ($P<0.05$). Similar results were found in study done by J. Phookan[6] *et al* with positive association between tobacco chewing and premalignant lesion. The practice of betel quid chewing is socially accepted in some parts of the subcontinent. The betel quid is a mixture of areca nut, catechu and slaked lime wrapped in betel leaf. Tobacco may be added to it. The habit of tobacco chewing has been found to be statistically significant for the development of precancerous oral lesions.[7] The cessation of tobacco use has led to fall in the incidence of leukoplakia and other lesions.[8]

CONCLUSION

Hence, we conclude that young age group with male predominance are major risk for premalignant lesion. There is correlation between tobacco use and premalignant conditions.

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