

Study Of Oral Lesions In Patients Visiting A Dermatology Out Patient Department : A Cross Sectional Study In Tertiary Care And Teaching Hospital, Ahmednagar

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Abstract :

Background : The oral cavity being readily accessible and visible part of the body opens a door for health care professionals regarding many systemic diseases and general health status. The oral lesions in dermatological diseases may be the early aspects of the disease manifestation or the most significant clinical appearance or the only sign/ and or symptom of such dermatological diseases & occasionally lesions occur simultaneously in the skin as well as mucous membrane. **Aims :** It is clinico-epidemiological study attempts to assess the aetiology of the oral manifestations & emphasizing the aspects referring to their location in patients of Ahmednagar, Maharashtra State, India. **Materials & Methods :** An observational, cross - sectional hospital-based study carried out on 100 patients who attended or referred to out-patient

Department of Dermatology, for various oral lesions over a period of one year. Patients were subjected for clinical examination, after obtained detailed history & if needed diagnostic procedures were performed to confirm the clinical diagnosis. **Results :** In the present study only oral lesion were seen in 61% of patient which includes various infections (29.50%), Neoplasms (16.39%), Aphthous stomatitis (14.75%), Lichen planus (9.83%), Allergic stomatitis (8.19%), Drug reactions such as Cheilitis, Perioral dermatitis & Bullous FDE together comprises (8.19%), Reaction patterns (6.55%), and LEOPARD syndrome (1.63%) and 39% patient had mucocutaneous involvement which includes Vesicobullous disorders (33.33%), Genodermatoses (15.38%), Reaction patterns (12.82%), Systemic disorders (12.82%) Drug reactions such as Toxic Epidermal Necrolysis/ Stevens Jhonson Syndrome/ Erythema Multiforme together

comprises (12.82%), Lichen planus (5.12%), Infection (5.12%) & Addisonian pigmentation (2.56%).

Keywords: Oral lesion, Mucosal lesion, Mucocutaneous disease

Introduction :

The oral cavity is thought of as the window to the body as oral manifestations accompany many dermatological diseases. Among the broad spectrum of causes leading to changes in the oral mucosa are infections from bacteria, fungi, viruses and other agents; physical and thermal influences, changes in the immune system, systemic diseases, neoplasia, trauma and some of which are issues of aging.^[1] The continuously increasing human habits of alcohol, tobacco, smoking and gutkha eating are likely to produce even more lesions in oral cavity, some of which may be life threatening.^[2]

Oral mucosal manifestation may be the initial feature, most florid clinical feature or only sign of such disease & sometimes lesions occur in both skin and mucus membrane. Mucocutaneous conditions are a group of disorders mainly observed in dermatology practice. The clinical presentation varies with different lesions. In mouth, vesicles & blisters are fragile and short lived due to trauma of mastication and speech, so they are confronted as erosions. Due to white hyperkeratotic mucosa wide range of diseases from linea alba to squamous cell carcinoma masquerade as leukoplakia. In tongue lesions, there is a variety of puzzling clinical picture, specially in regard to reaction patterns to many disorders involving inflamed papillae of tongue. Many classical dermatological disorders such as pemphigus vulgaris or lichen planus may start in the mouth or be confined there for many years before affecting the skin.^[3] Epidemiologic studies provide information important to understanding severity of oral disease in a specific population, for their better management & to reduce the morbidity & mortality.

Materials & Methods : The study group consisted of 100 patients, who attended & referred to out-patient Department of Dermatology, over a period of one year. Patients with oral lesions were subjected for systematic clinical examination & questioned regarding any habits like smoking, pan chewing, alcohol intake, the frequency & duration of the habit. Necessary investigations were performed as per the requirement to establish the diagnosis. Data were collected & recorded in the proper Case Proforma & Photographs were taken. Institutional Ethical Committee (IEC)

approval & patients consent as per the IEC guidelines were obtained for each part of this study. The results of the study were analyzed and presented as descriptive statistics.

Results : The total of 100 patients which comprises 47 males & 53 females, showed female preponderance with female to male ratio 1.2: 1.

Table 1: Distribution of study patients according to Gender & Age group

Age (year)	Males	Females	Total	Percentage %
≤ 10	4	7	11	11%
11-20	6	6	12	12%
21-30	8	12	20	20%
31-40	9	17	26	26%
41-50	9	6	15	15%
≥ 51	11	5	16	16%
Total	47	53	100	100%

Among the 100 patients examined only oral lesions were observed in 61% patients & Oral mucosal lesions with respective dermatological lesions i.e. mucocutaneous involvement were seen in 39% of patients.

Table 2: Distribution of study patients according to site of involvement & etiological factors

Sr. No.	Presentation/ Etiology	Oral Lesions only				Mucocutaneous disorders				Grand Total
		Male		Female		Male		Female		
		No.	%	No.	%	No.	%	No.	%	
1	Infections	5	25	13	65	---	---	2	10	20
	Herpes simplex	1		13		---	---	---	---	
	Erythema Multiforme	---	---	---	---	---	---	1	---	
	Hand Foot Mouth Disease	---	---	---	---	---	---	1		
	Oral Candidiasis	4	---	---	---	---	---	---	---	
2	Vesicobullous disorders	---	---	---	---	4	30.76	9	69.23	13
	Pemphigus	---	---	---	---	3		8		
	EBD	---	---	---	---	1		1		
3	Drug Induced	2	20	3	30	4	40	1	10	10
	Cheilitis	---	---	2		---	---	---	---	
	Perioral dermatitis	1		1		---	---	---	---	
	Bullous FDE	1		---	---	---	---	---	---	
	TEN	---	---	---	---	1		1		
	SJS	---	---	---	---	2		---	---	
	EM	---	---	---	---	1		---	---	
	Neoplasms	7	70	3	30	---	---	---	---	
	Pyogenic granuloma	---	---	1		---	---	---	---	
Mucocele	---	---	2		---	---	---	---		

4	Leukoplakia	1		---	---	---	---	---	---	10
	Submucous fibrosis	3		---	---	---	---	---	---	
	Oral SCC	2		---	---	---	---	---	---	
5	Oral florid papillomatosis	1		---	---	---	---	---	---	9
	Aphthous stomatitis	7	77.77	2	22.22	---	---	---	---	
	Reaction Patterns	3	---	1	---	1	44.4	4	55.5	
6	Angioedema	---	---	---	---	1		2		9
	Geographic tongue	---	---	1		---	---	1		
	Granulomatous cheilitis	2		---	---	---	---	---	--	
7	Fissured tongue	1		---	---	---	---	1		8
	Lichen planus	6	75	---	---	---	---	2	25	
	Systemic disorders	2	25	1	12.5	1	12.5	4	50	
8	LE	---	---	---	---	---	---	4		8
	Anemic stomatitis	2	---	---	---	---	---	---	---	
	Sjogrens syndrome	---	---	1		---	---	---	---	
9	Acrodermatitis enteropathica	---	---	---	---	1		---	---	6
	Genodermatitis	---	---	---	---	2	33.33	4	66.66	
	Ectodermal dysplasia	---	---	---	--	2		2		
10	Neurofibromatosis -1	---	---	---	---	---	---	1		5
	Papillion lefvere syndrome	---	---	---	---	---	---	1		
	Allergic stomatitis	3	60	2	40	---	---	---	---	
11	Pigmented	---	---	1	50	---	---	1	50	2
	Addisonian	---	---	---	---	---	---	1		
	LEOPARD syndrome	---	---	1		---	---	---	---	
Total		34		27		13		26		100

In premalignant neoplasms, the habit of smoking was seen in 3 out of 4 patients & tobacco chewing was seen in all 4 patients. In malignant neoplasm only tobacco chewing habit was seen in all 3 patients.

Conditions	Smoking	Tobacco chewing	HIV +ve
Leukoplakia	1	1	---
Oral submucous fibrosis	2	3	---
Oral Scc	0	2	---
Oral florid papillomatosis	0	1	---
Pyogenic granuloma	0	1	---
Mucocoele	0	0	---
Herpes Simplex	---	---	1
Oral Candidiasis	---	---	2
TEN	---	---	1
Anemic stomatitis	---	---	1
Addisonian pigmentation	---	---	1

Out of 100 examined patients 6 had associated Human Immunodeficiency Virus (HIV) infection which comprises 2 cases of oral candidiasis & 1 each case of herpes simplex virus infection, toxic epidermal necrolysis, anaemic stomatitis and addisonian pigmentation. [Table 3]

Anatomic distribution of oral lesion in our study population is as follows 58% oral lesions involved Gingiva, Peridontium& Buccal Mucosa, 22% oral lesions involved Lips, 8% involved tongue, 5% teeth, 4% salivary glands & 3% palate.

Table 4: Anatomic distribution of oral lesion in oral cavity

Sr.No	Site of lesion	Total	%
1	Gingiva, peridontium & mucosa	58	58
2	Lips	22	22
3	Tongue	8	8
4	Teeth	5	5
5	Salivary glands	4	4
6	Palate	3	3
Total		100	

Discussion : Present study showed female predilection (53%) & mean age range of patients was 6 months -78 years, with the median age of 33.5 years. Study by Jalayer Naderi et al^[4] the reported mean age was 39.56 years almost concordant to our study result. One possible explanation for female predilection is that, they may be genetically more susceptible for development of diseases & in addition to making more demands on the outpatient health services than men. Study also showed maximum number of patient 46% in 3rd& 4thdecade. This was consistent with results of Mathew AL et al^[5] who in their study reported 44.8% patients in the age group of 21-40 years. This could be attributed to adopted life style by these age group populations.

Our study showed 61% patient had only oral lesions & 39% patient had mucocutaneous involvement. Suliman NM et al^[6] observed oral ulcers due to dermatological diseases in 23.2% of their patients. The high prevalence in our study could be attributed to the referral bias and study setting in the dermatology department of a tertiary care hospital.

Study observations showed infectious cause in 20 (20%) of patients, out of these 16 had viral & 4 had fungal (oral candidiasis) etiology. Herpes Simplex Virus (HSV) infection accounted for all 16 case of viral etiology, out of these 14 had oral lesions only in the form of herpes labialis & her petic gingivostomatitis & the remaining 2 case had mucocutaneous involvement in the form of hand, foot, mouth disease& erythema

multiforme. 1 case of herpes labialis was associated with HIV infection. Kovac-Kavacic et al^[7] reported 16% prevalence of HSV infection in their study. In observed 4 cases of candidiasis, 2(50%) were of perleche & 1 each was of median rhomboid glossitis & pseudomembranous type. 2 cases of oral candidiasis had concomittant HIV infection. Mathew et al^[5] in their study reported a prevalence of 1.03% each of median rhomboid glossitis and pseudomembranous types of candidiasis.

Vesicobullous disorders in our study constituted 13 (33.33%) patients which include 11 (28.20%) patients of pemphigus group of disorder & 2 (5.12%) patients of epidermolysis bullosa dystrophica.Suliman NM et al^[6] reported oral lesions of pemphigus in 46.9% out of the 72.2 % of his study patients of vesiculobullous diseases.

Drug induced oral lesions seen in 10% of our studied patients, out of them 5 had only oral involvement in the form of oral isotretinoin induced cheilitis ^[2], perioral dermatitis due to application of halogenated topical corticosteroid & bullous Fixed Drug Eruption (FDE) ^[1] & remaining 5 patients had mucocutaneous involvement which include 2 cases each of Steven Jhonsons Syndrome(SJS) due to ingestion of phenytoin and nimesulide, Toxic Epidermal Necrolysis (TEN) in an HIV-positive patient due to ingestion of nevirapine and second case is due to cotrimoxazole& 1 case of Erythema Multiforme. Barvaliya M. et al^[8], observed antimicrobials (50%), nonsteroidal anti-inflammatory

drugs (22.41%), and anti-seizure drugs (18.96%) as the drug commonly resulting in SJS, TEN, SJS-TEN overlap in his study.

Ten (16.39%) cases of neoplasms were seen in present study. Out of these 10 cases 3 were benign lesions includes mucocele two cases & one case of extralingival pyogenic granuloma. In the study by Seyed majidi et al^[9] pyogenic granuloma was reported in a higher percentage (35.5%). This difference may due to their study being restricted to localised growths. Out of 4 cases of premalignant lesions which were proven histopathologically, three had oral submucous fibrosis & the remaining one had leukoplakia. two histopathologically provencases of maligant oral lesions were oral squamous cell carcinoma (SCC) & oral florid papillomatosis. All of the patients with premalignant & malignant oral lesion were males & had a longstanding history of tobacco chewing& smoking. In a study by Mathew et al^[5] prevalence of leukoplakia and oral submucous fibrosis were reported as 1.59% and 2.01% respectively & oral malignancies in 1.76% of their patients.

In our study group, Aphthous stomatitis was seen in 9 (14.75%) of the cases which was comparable with study on swedish population done by Axell and Henricsson was 17.7%.^[10]

Of the 9 (9%) patients with reaction pattern, 4 patients had only oral lesions which include two cases of granulomatous cheilitis, one each case of geographic & fissured tongue & 5 had mucocutaneous involvement which include three cases of angioedema & one each presented with geographic tongue & fissured tongue along with cutaneous lesion of psoriasis. Mathew et al⁵ reported geographic & fissured tongue in 0.84% and 5.7% of their study patients respectively.

Oral lichen planus seen in 8 (9.83%) patients, 6 out of 8 patients had oral presentation only with history of dental filling while remaining 2 had mucocutaneous involvement. Mathew et al^[5] & Kovac-Kovacic^[7] reported a lower prevalence of 1.26% & 2.3% respectively of LP in their study. Higher (9.83%) prevalence in our study could be attributed to the contact reactivity due to amalgam fillings.

In our study oral lesions consequent to systemic diseases seen in 8 (8%) patients, of which 5 cases had mucocutaneous involvement include three cases of SLE, one each case of DLE &acrodermatitis enteropathica. three cases of oral involvement include two anemic stomatitis cases & one case of Sjogren

syndrome. one case of anemic stomatitis had concomitant HIV infection manifesting as bald tongue, who was on HAART. Cheshire H et al^[11] reported a case of adult acquired acrodermatitis enteropathica in a 65 year old female.

Genodermatoses were seen in 6% of our study cases & all have mucocutaneous involvement. Four of which were diagnosed as ectodermal dysplasia, one case each of PapillonLefevre syndrome & neurofibromatosis type 1. Ectodermal dysplasia includes 2 cases each of hypohidrotic & anhidrotic type. A single case of neurofibromatosis type-1 presented with palatal neurofibroma, Axell T et al, had reported a 5% prevalence of oral neurofibroma in neurofibromatosis type 1.^[10]

Other conditions recorded in the study were: Allergic stomatitis 5% and Pigmented lesion 2%.



Fig. 1-Bullous FDE



Fig. 2-Pemphigus



Fig. 3- Fissured Tongue



Fig. 4-Lichen Planus



Fig. 5-Geographic Tongue

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