Clinicopathological study of Ulceromembranous lesions of oral cavity and oropharynx

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ABSTRACT

Background : Ulceromembranous lesions in oral cavity and oropharynx are common conditions. Considering the variability with which an individual condition may present, as well as the fact that a variety of diseases may behave with similar presentation within the oral cavity, the practitioner must approach the diagnosis and treatment in a methodical approach.

Materials & Methods: Our study is a prospective, observational, randomized and open study conducted for a period of 1 year from 1st December 2006 to 1st December 2007. The complete data was collected in a specifically designed case recording form (CRF), from the patients by taking history of illness and by doing detailed clinical examination and relevant investigations.

Results: A study was conducted on 100 cases of ulcers and membranous lesions of oral cavity and oropharynx. Majority of the cases were non-specific ulcers (54%). Occurrence of the ulcers is almost similar in both sexes with males having an incidence of 53%.

Conclusion: Low socioeconomic status, lack of education, bad oral hygiene, bad habits cultivated in early childhood are the predisposing factors. In case of ulcers associated with systemic diseases, systemic disease should be treated as per the cause. Majority of these ulcers are non specific and can be managed on out-patient basis with symptomatic treatment without need for admission and invasive tests. Whenever cause for ulcer is found or ulceromembranous lesions are associated with some systemic disease, they are to be treated accordingly.

Keywords: Ulcer, ulceromembranous, oral cavity, oropharynx.

INTRODUCTION

Ulceration of the oral mucosa is a frequent occurrence producing painful ''aphthae,'' a term of ancient origin referring to ulceration of any mucosal surface. The oral mucous membranes are specialized frail membranes and are susceptible to erosion. Full thickness erosion of the epithelium into the lamina propria produces painful ulceration. Once an ulcer forms, it is subjected to repeated irritation from saliva and microflora and the acute inflammatory stage may be followed by a pattern of chronic inflammation. Although there are many diverse causes, oral ulcers frequently demonstrate similarity both clinically and histologically.

Acute oral ulcers are of short-lived duration and 6 weeks is a reasonable point of differentiation between acute and chronic ulcers. The causes of chronic oral ulceration are multiple, ranging from malignancy to systemic disease and other chronic inflammatory or immunobullous disorders, such as pemphigus, paraneoplastic disease, mucous membrane pemphigoid, and lichen planus[1].

The causes of ulcers include: local causes (e.g. trauma); recurrent aphthae (Behcet's syndrome); malignant neoplasms; ulcers associated with systemic disease; iatrogenic causes; disorders of uncertain pathogenesis[2].

Diphtheria, a leading cause of childhood mortality in the pre-vaccination era, has witnessed resurgence in the last decade in the developing world and in parts of Europe. Faucial diphtheria can mimic acute tonsillitis and glandular fever, and a degree of clinical suspicion is required in order to diagnose and treat a potentially life-threatening condition. This assumes greater significance in today's world[3]. Oral manifestations of HIV are common and have been important in identification of patients harboring the HIV virus and in predicting the decline in their immune system. Early recognition, diagnosis, and treatment of HIV-associated oral lesions may reduce morbidity[4].

A change in color, texture, or consistency of the oral mucosa requires an explanation. In some instances, history and clinical presentation yield enough information for definitive diagnosis, but often biopsy with submission of lesional tissue for histopathologic evaluation is necessary. It is critical for a clinician to identify common oral mucosal lesions readily and to know when a specific lesion requires histologic diagnosis[5].

In spite of morbidity associated with ulcero-membranous lesions in oral cavity and oropharynx and their significant effect on general health of an individual, clinicians tend to ignore the condition. It is necessary to diagnose and treat these lesions early.

MATERIALS & METHODS

The sources of data for our study are the patients consulting the department of ENT and also patients referred from other departments of combined hospitals of VIMS, Bellary. The study was conducted for a period of 1 year from 1st December 2006 to 1st December 2007.

RESULTS

The observations made were from the data collected from 100 patients, presenting with oral ulcers, membranous lesions of oral cavity and oropharynx, presenting to department of ENT-VIMS, Hospital, Bellary, Skin and STD, Medicine and Dental department. The study group contained patients in the age group 6 to 62 years. 53 patients were males and 47 were females. Male to female ratio was **1:0.9**. The group contained 73 from low socioeconomic status 23 from middle and 4 from high socioeconomic status.

A comparison has been done with etiology to figures that have appeared in the literature. The lesions were as shown in Table 1.

Table 1: Proportion of oral ulcers

Sl. No.	Cause	No	Percentage
01	Non specific ulcers	54	54%
02	Aphthous ulcers	18	18%
03	Dental	04	04%
04	Malignant	08	08%
05	HIV & AIDS	03	03%
06	Ulcers associated with Skin lesions.	03	03%
07	Radiation induced mucositis	03	03%
08	Membranous lesions	06	06%
09	Tuberculosis	01	01%
	Total	**100**	**100%**

In our study, lesions were commonly found between the age group of 11-30 yrs, accounting for 56%, followed by 31-50 yrs and 0-10 yrs. In our study, it was more common in low socioeconomic status with 75% and middle class in 23%.

Non Specific ulcers were found more commonly in young adults and middle age. 53.6% of the cases were found in the age group of 11-30 years and 18.5% cases in the age group of 31-40 years.

They were seen more often in males. Females were affected in 44.4% of the cases & males in 55.5%. Majority of ulcers healed in 1-2 weeks. Among 54 cases 3 cases failed to heal in 3 weeks. Biopsy was done on these ulcers, showed chronic inflammation, no features of malignancy. These patients had no malignant change during the study period. Lesions were more often seen associated with smoking followed by alcohol intake. These habits are commonly seen in people of this region. History of smoking was elicited in 40.7% of the cases, Gutkha chewing in 37% of the cases and alcoholism in 25.9%. Others are depicted in Table 2.

Table 2: Distribution of etiological factors of non specific ulcers.

Sl. No.	Cause	No	Percentage
01	Smoking	22	40.7%
02	Alcohol	14	25.9%
03	Tobacco chewing	04	7.4%
04	Betel nut	08	14.8%
05	Gutkha	20	37%
06	Febrile illness	03	5.5%

Cooke classifies aphthous ulcers in to minor, major and herpitiform ulcerations. In our study we found minor form of ulcers in 88.8% of the cases and major form in 11.1% [Table 3]. Buccal mucosa is the commonest site affected (72.2%) followed by lips 22.2% and soft palate 27.7%. [Table 4]. Females were found to be more commonly affected by this form of ulcers 61.1%, Males 38.8%.

Table 3: Types of aphthous ulcers seen.

Sl. No.	Type	No	Percentage
01	Minor	16	88.8%
02	Major	02	11.1%
03	Herpetiform ulcerations	0	0%
	Total	**18**	**100%**

Table 4: Anatomical Distribution of aphthous ulcers.

Sl. No.	Site	No. of Cases	Percentage
01	Lips	04	22.2%
02	Tongue	02	11.1%

03	Buccal cavity	13	72.2%
04	Gingiva	0	0%
05	Post. Pharyngeal wall	0	0%
06	Soft palate	05	27.7%
07	Floor of mouth	04	22.2%

All the cases studied were associated with ulcer, pain and burning sensation in the mouth. In 10 cases, there was history of excess salivation [Table 5].

Table 5: Associated factors in aphthous ulcers.

Sl. No.	Symptom	No. of Cases	Percentage
01	Ulcer	18	100%
02	Pain and burning sensation	18	100%
03	Fever	01	5.5%
04	Excess salivation	10	55.5%

In all the four cases of dental ulcers, sharp teeth were seen adjacent to the ulcers. Removal of the sharp tooth was followed by complete healing of the ulcer.

Among the 100 cases, there were 8 cases of oral malignancy. Squamous cell carcinoma was the most common histopathological type, found in 7 cases (87.5%) and adenoid cystic carcinoma in 1 case (12.5%).

History of smoking was the most common associated habit noted in 62.5% of the cases, history of alcohol intake in 50% of the cases. Poor oral hygiene was found in all the cases. Commonly found in the older age group. 87.5% of the patients were above the age of 41 years. Only 12.5% patients were below 40 years. Disease was more common in males. Nearly 2/3rd of the patients were males. All the cases were associated with ulcer in the oral cavity. Weight loss seen in 75% cases & pain in 62.5%.[Table 6].

Table 6: Symptom Index of malignant ulcers.

Sl. No.	Symptom	No. of Cases	Percentage
01	Ulcer	8	100%
02	Membrane	2	25%
03	Pain	5	62.5%
04	Weight loss	6	75%
05	Bleeding	1	12.5%
06	Dysphagia	0	0%
07	Excessive Salivation	0	0%

Ulcers associated with skin lesions were seen in 3 cases. They were seen in patients in the age group of 20-50 years. Two cases had pemphigus vulgaris, one had dermatitis herpitiformis. Skin diseases were treated with steroids and topical symptomatic treatment for the oral cavity.

Radiation Induced Mucositis and ulcers were seen in patients of 41 years of age and above, patients who received radiotherapy for head and neck. All the cases were above the age of 41 years. All patients presented with pain, burning sensation and dry mouth. All had weight loss, ulcers and membranous lesions in mouth.

Membranous lesions were commonly seen in children, 66.6% of the patients were below the age of 10 years. In all the 6 patients below the age of 20 years, membrane was due to the follicular and membranous tonsillitis. 3 patients on radiotherapy and one patient with HIV associated with oral candidiasis had membrane over the buccal and oropharyngeal mucosa.

DISCUSSION

Most of the ulcers in this study were non-specific ulcers. They were diagnosed as non-specific ulcers, after thorough clinical and lab investigation revealed no evidence of aetiology in their causation. Most of these are short term (<3 wks) in nature. Smoking and betel nut chewing were the predominant habits.

It is concluded that most of the ulcers in oral cavity and oropharynx are non specific. They heal with symptomatic treatment in the form of improved oral hygiene, topical antiseptics and analgesics. So there is no need for admission and biopsy, they can be managed with symptomatic treatment on OPD basis. Biopsy is done in ulcers which show no signs of healing, or which persist for long duration (>3 weeks). Oral manifestations of HIV infection occur in 30–80% of the affected patient population. There is no particular oral lesion which is associated only with HIV-AIDS but there are certain manifestations like oral candidiasis, oral hairy leukoplakia (OHL) which are associated very frequently and are considered AIDS-defining diseases[6].

Aphthous ulceration of the oral cavity is frequently encountered in general population. Although the exact aetiology and pathology remain obscure, many factors can contribute to the pathogenesis of these lesions, such as immunologic factors, local trauma, smoking, stress, hormonal status, family history, food hypersensitivity and infection. Most cases were observed in females aged between 20-30 years associated with stress.

In the present study, we found that the most common age group affected is between 21-40 years, found more commonly in females (61.1%), average duration of the ulcer was 8 days. Buccal mucosa was the site most commonly affected.

The results of the study were found to be in line with the study published by Sirajedin sabri natah et al[7] (2001) in terms of age, sex distribution, duration of ulcer and disease duration. [Table 7].

Table 7: Comparison study of aphthous ulcers.

Parameters	Out Study	Sirajedin sabri natah et al[7]
Age(21-40)years	14(77.7%)	19(79.1%)
Sex females	11(61.1%)	14(58.3%)
Average duration of ulcer	8 days	4 days
Average duration of the disease	5 years	20 years
Site of ulcer:-		
Buccal mucous Membrane	13(72.2%)	17(70.8%)
Lips	4(22.2%)	10(41.6%)

8 cases of oral malignancy were observed in our study. Most common age group was 41-50 years (62.5%) and 87.5% of cases in the age group of 41-60years.

Table 8: Comparision study of malignant ulcers.

Parameters	Out Study	Chen gs, chen et al[8]
Totel no of cases	8	211
Commonest age group	41-60(87.5%)	40-59(63.3%)
M:F	5:3	11.4:1
Smoking	5(62.5%)	-
Alcohol	4(50%)	-
Betel nut chewing	5(62.5%)	144(73.85%)
Buccal mucosa	(25%)	40.8%
Gingiobuccal sulcus	(25%)	26.6%
Tongue	(12.5%)	25.6%
Squamous cell carcinoma	87.5%	90%

Among the 100 cases 8 cases were of oral malignancy. In our study most common age group was 41-50 years (62.5%) and 87.5% of cases in the age group of 41-60years which is comparable to Chen GS, Chen CH et al study[8] [Table 8]. Male to female ratio was 5:3. Though males are affected more commonly, compared to the above study (11.4:1), sex difference is less in our study. It could be because of habit of betel nut and tobacco chewing in females prevalent in this region. In our study, we noted history of smoking in 62.5%, alcohol in 50%, chewing betel nut and tobacco in 62.5%. In the present study buccal mucosa and gingiobuccal sulcus were the sites most commonly affected. Squamous cell carcinoma was the most common histopathologic type. (87.5%).

Our study is comparable to the study by Rothman K and Keller A (1972) who have showed that the effect of combined exposure of alcohol and tobacco are the risk factors for cancer of oral cavity and pharynx[9].

Among the 100 cases, 3 cases of ulcers associated with skin diseases were observed. Pemphigus vulgaris and dermatitis herpetiformis are the diseases associated with ulcers in oral cavity in our study. Present study is compared with two previous studies Iamaroon et al[10] (2006), Camacho-Alonso et al[11] (2005). Our study is comparable to the above studies in terms of age, sex distribution, site of involvement in the mouth and treatment. We had only three cases in the present study.

In our study one case of pemphigus vulgaris was found which was associated with skin lesions &had seven episodes of exacerbations. The patient was treated symptomatically with topical antiseptics and steroids in conjunction with skin colleagues and this resulted in improvement .

CONCLUSION

Oral ulceromembranous lesions are common diseases, causing morbidity in patients for which patients seek medical advice. The lesions were found more commonly in low socioeconomic status group, where there is lack of education, improper food habits, bad oral hygiene, lack of awareness of the disease and bad habits cultivated in early childhood are the major predisposing factors.

Most common lesions found were nonspecific oral ulcerations with 54% of the cases in this study. These ulcers heal after symptomatic treatment based on clinical diagnosis. Patients can be treated on OPD basis, so there is no need for admission and biopsy in these cases. Chronic ulcers should be followed up and biopsy should be done at regular intervals to exclude malignancy.

Earlier, biopsy was one of the battery of investigation in diagnosing oral ulcerative conditions. Since it was found that nonspecific ulcers are the predominating conditions and the biopsy procedure is associated with pain, discomfort, bleeding etc, the current study concludes that biopsy is indicated only in long term (>3 weeks) or clinically undiagnosed cases.

Figure 1:

Figure 1: Clinical photograph showing Membranous Tonsillitis

Figure 2:

Figure 2: Clinical photograph showing Candidiasis in HIV patient

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