

Examination of Ulcero-Proliferative Lesions of Oropharynx and Oral Cavity- A Clinical Perspective

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Abstract:-

➤ Introduction

Patients often present with ulcero-proliferative lesions of the oropharynx and oral cavity in the outpatient department (OPD). These lesions have a negative impact on the patients' health, so it's critical to make an accurate diagnosis and administer the right care.

➤ Aim of the Study:

To determine the proportion of patients who exhibit different ulcero-proliferative lesions clinical characteristics in the oropharynx and oral cavity.

➤ Patients and Methodology:

This is prospective study done at Department of ENT, Guntur Medical College, spanning a period of 18 months. This study included patients with ulceromembranous lesions in the oropharynx and oral cavity, regardless of age. This study excluded Patients who had radiation therapy soon before developing the illness and who had traumatic injuries but no infection. Detailed history including personal, family and medical history were noted. Local and general examination was done. Selected patients were subjected to investigations like routine blood investigations, gram stain, albert's stain, KOH mount, culture and sensitivity, peripheral smear, serology, FNAC, HPE, USG, chest x ray, CT neck, MRI.

➤ Results

In the current study, men dominated women (65.69%) and the most prevalent age group participating was 41–60 years old (45.09%). The most typical symptoms of the throat were odynophagia, burning sensation, dysphagia, and throat pain. 5.9% of the patients had nose issues and 14.7% had associated ear complaints. General symptoms included fever in 10.7% of cases, weight loss in 23.5%, general weakness in 15.6% of cases, and skin lesions in 6.9% of cases. Systemic disorders such as HIV was present in 3.9%, hypertension in 25.4%, and diabetes in 34.3% of cases. Risk factors include chewing tobacco (17.6%), drinking alcohol (14.7%), smoking (43.1%), and having previously been exposed to radiation (0.9%). The tongue was the most frequently afflicted site in this study (44.1%), followed by the palate (29.4%), the buccal mucosa (15.6%), the tonsils (8.8%), the lips (7.8%), the alveolus (2.9%), and the RMT (1.9%). Neoplastic

etiology accounted for 41.1% of the total etiology discovered. It was followed by inflammatory (31.3%), infectious (20.5%), and miscellaneous (6.8%) etiologies. 52.9% of patients had conservative care, 36.2% had oncosurgery team treatment through surgery, and 10.7% had radiation therapy. Of the patients with neoplastic etiology, 10.7% had radiation therapy.

➤ Conclusion:

The incidence of cancers rises in the adult population with increased habits like smoking and chewing nicotine in any form. A high degree of suspicion is required when treating oral ulcers, particularly those that are chronic. The gold standard for confirming the diagnosis is always a biopsy and a histopathological examination.

Keywords:- Radiotherapy, Ulceromembranous Lesions, Inflammatory Etiology, Histopathological Examination.

I. INTRODUCTION

For an otolaryngologist, mouth is obviously important. It serves as the entrance point for visual examinations of the larynx, oropharynx, and nasopharynx, where the eustachian tube opens. In the E.N.T. OPD, ulcers and proliferative lesions of the mouth cavity and oropharynx are frequent complaints. To treat the underlying pathology, one must be properly informed about the aetiopathology of these lesions. An ulcer represents a break in an surface of the epithelium. Patients often consult doctors for common diseases like ulcers. The presence of lesions on the skin, on mucosa other than the oral cavity, and on evidence of bullae and vesicles are features that are helpful in determining the cause of ulcers. The membrane lesion, which is commonly seen in cases of diphtheria, is an inflammatory condition where mucous membrane surface cells die, resulting in exudates being laid down on the surface and fibrosis connecting the entire necrotic layer to the underlying tissue to produce a false membrane. There are several reasons for ulcero-proliferative lesions in the oropharynx and oral cavity; these lesions can also affect the mucous membranes in other areas of the body.

They could be a component of systemic or local illnesses. Numerous underlying pathologies can cause ulcers and membrane lesions. To determine the cause and start treatment, a correct diagnosis, a complete history, a general,

systemic, and local examination, as well as investigations, are required ^(1,2).

The impact on an individual's general health and the morbidity associated with ulcero-membranous lesions in the oropharynx and oral cavity are significant.

II. STUDY OBJECTIVES

To determine the proportion of patients who exhibit various ulcero-proliferative lesion clinical characteristics in the oropharynx and oral cavity.

III. PATIENTS AND METHODOLOGY

This is prospective study done at Department of ENT, Guntur Medical College, spanning a period of 18 months.

➤ *Inclusion Criteria*

Patients with ulcero-proliferative lesions in the oropharynx and oral cavity, regardless of age.

➤ *Exclusion Criteria*

Patients who had radiation therapy soon before developing the illness and who had traumatic injuries but no infection.

The study's methodology is a time-limited prospective observational study of patients with ulcero proliferative lesions in the oropharynx and oral cavity who visit the GGH Guntur outpatient department.

After receiving institutional ethics committee approval, the study was started. After explaining the study's purpose and plan to the study participants in the language they were most familiar with, they were asked to sign a written consent form. A proformam with a unique design was utilized to gather information on every single subject.

Patients seeking outpatient care at all age ranges that had an oropharyngeal and oral cavity ulcer proliferative lesion was assessed. A thorough history that included medical, family, and personal information was recorded.

There was a general and local examination. With caution to prevent surface contamination, swabs were taken from the base of the ulcer and the membrane's surface. The swab material was stained (grams/alberts/KOH mount) and tested for sensitivity to culture. Complete blood counts, ESRs, and serology were performed. A biopsy was taken from the ulcer's margin in cases where malignancy was suspected, and the sample was sent for histopathological analysis. From suspected lymph nodes, FNAC was performed. Radiological tests, including CT neck and chest x-rays, were carried out in pertinent patients to assess the extent of suspected malignant lesions and identify any subclinical metastatic lymph nodes. Cancer patients received treatment with radiation, surgery, or a combination of the two. Oral and topical antiviral medications, or NSAIDS, were administered to patients who had been diagnosed with viral infections. Oral or systemic broad spectrum antibiotics were used to treat patients whose bacterial infections were discovered. Oral and topical antifungals were used to treat patients with fungal infections. Required investigations included routine blood tests, gram stain, albert's stain, KOH mount, culture and sensitivity, peripheral smear, serology, FNAC, HPE, USG, chest x-ray, CT neck, and MRI for a subset of patients.

IV. RESULTS

The age group affected by the study was most frequently between 41 and 60 years old (45.09%), followed by 21 to 40 years old (36.2%). Therefore, in our study, the most affected group was 5th and 6th decade. In our study, the oldest patient was 79 years old, and the youngest child was six years old. There were 35 females and 67 males, or 65.6% and 34.3% of the total number.

The age group between 21 and 40 years old, which makes up 19.6% of the population, is followed by the age group between 41 and 60 years old, which makes up 36.2% of the population in our study. Table 1 displays the age distribution of the female population by age group: 16.6% belongs to the age group between 21 and 40 years old, and 8.8% to the age group between 41 and 60 years old.

Table 1 Demographic Distribution in Study

Age Distribution	Number	Percentage
0-20 years	7	6.9
21-40 years	37	36.2
41-60 years	46	45.09
61-79 years	12	11.7
Gender		
Males	67	65.6
Females	35	34.3

The most frequent complaint in our study was odynophagia, which accounted for 69.6% of complaints. Burning sensation came in second with 65.6%, dysphagia at 57.9% and throat pain at 55.9%.

Of the study participants, 5.8% reported having nose complaints and 14.7% reported having ear complaints. For

23.5% of people, weight loss is the most prevalent general symptom, followed by weakness for 15.6% of people. The most prevalent systemic disease, accounting for 34.3% of cases, was found to be diabetes mellitus, followed by hypertension (25.4%) and HIV (3.9%) as shown in Table-2.

Table 2 Clinical Presentation of Cases in Study

Throat Complaints	Number	Percentage
Dysphagia	59	57.9%
Odynophagia	71	69.6%
Throat Pain	57	55.9%
Burning Sensation	67	65.6%
Foreign Body Sensation	42	41.1%
Cough	13	12.7%
Neck Nodes	12	11.7%
Ear Complaints	15	14.7
Nose Complaints	6	5.9
General Symptoms		
Fever	11	10.7%
Weight Loss	24	23.5%
Weakness	16	15.6%
Skin lesions	7	6.9%
Systemic Diseases		
Diabetes	35	34.3
Hypertension	26	25.4
HIV	4	3.9

Table 3 Distribution of Cases According to Risk Factors

Risk Factors	Number	Percentage
Smoking	44	43.1%
Alcohol	15	14.7%
Tobacco	18	17.6%
Exposure To Radiation	1	0.98%

The most prevalent risk factor in our study, accounting for 43.1% of study participants, was smoking, followed by chewing tobacco (17.6%) and alcohol (14.7%). One subject had a history of radiation exposure as shown in Table-3.

Table 4 Distribution According to Site of Involvement and Etiology

Site	Number	Percentage
Buccal mucosa	16	15.6
Palate	30	29.4
Lips	8	7.8
Tongue	45	44.1
Alveolus	3	2.9
Tonsil	9	8.8
RMT	2	1.9
Etiology		
Infective	21	20.5%
Inflammatory	32	31.3%
Neoplastic	42	41.1%
Miscellaneous	7	6.8%

According to our study, the tongue accounts for 44.1% of all affected sites, followed by the palate (29.5%), buccal mucosa (15.6%), and palate (29.5%). In our investigation, the most common etiology was found to be neoplastic, accounting for 41.1% of cases, followed by inflammatory, accounting for 31.3%, infectious, accounting for 20.5%, and miscellaneous, accounting for 6.8% as shown in Table-4.

In our study, most common cause of lesions is neoplastic etiology, with tongue involvement being more common than palate involvement. The buccal mucosa is more commonly involved in inflammatory lesions than the tongue. Tonsil involvement is more common than palate involvement among infectious lesions as shown in Table-5.

Table 5 Distribution According To Sites Involved in Etiology

Site	Infective	Inflammatory	Neoplastic	Miscellaneous
Buccal Mucosa	1	8		7
Lips		5		3
Palate	14	2	10	
Tongue	3	15	27	
Tonsil	5		4	
Alveolus			3	
RMT	2			

52.9% of patients in our study received conservative care, 36.2% of patients with neoplastic etiology underwent surgical treatment from an oncosurgery team, and 10.7% of patients received radiation therapy as shown in Table-6.

Table 6 Distribution of Patients According to Treatment Modalities

Treatment modality	percentage
conservative	52.9%
surgical	36.2%
Radiotherapy	10.7%

V. DISCUSSION

The common age group affected in our study is between 41 and 60 years old. According to research by John S. et al., patients who were female and between ages of 36 and 45 had the highest percentage of ulcero-membranous lesions (17%), while patients who were male and between the ages of 46 and 55 had the highest percentage (17%) [3]. According to a study by Prakash et al., the age group most affected was 11–30 years old [3]. A study by Sandeep chahande et al. discovered that the age group of 0–9 years old had the fewest cases of mucosal lesions, while age group of 10–19 years old had most cases [4].

Maximum cases affected range between 10–25 years old, while minimum cases range between 46–65 years old, according to a study by Bhaskaran K et al. [5].

The lowest age we found in our study was 6 years old, and highest age was 79 years old. According to a study by John S. et al. [1], the lowest age of a patient was a 22-year-old man, and the highest age was 65. According to a study by Sandeep et al., patients ranged in age from one year to seventy years. In our study, the greatest frequency of ulcero-membranous lesions was observed in male patients aged 41 to 60 and in female patients aged 21 to 40.

➤ *The Male to Female Ratio in this Study is 1.9:1.*

A 2017 study by Manjunath K et al. [8] also reveals a preponderance of men [8]. Bhaskaran K et al.'s study [5] Additionally, Rajesh Kumar A et al discovered that the ratio of men to women was 1.08:1. The male to female ratio, according to a study by Prakash et al. [3], was 1.1:1. According to a study by Sandeep Chahande et al. [4], the ratio of men to women was 1:1. According to a study by John S. et al. [1], females (60%) were most frequently impacted.

In our study, odynophagia accounted for 69.5 percent of throat complaints, followed by burning sensation (65.6%), dysphagia (57.9%), throat pain (55.9%), and foreign body sensation (41.1%). According to a study by John S. et al. [1], discomfort and ulcero membranous lesions in the oral cavity were the most common symptoms, followed by pain and a burning sensation. According to a 2017 study by Sridhar RD et al, odynophagia was the most common symptom, followed by throat pain. According to a study by Sandeep Chahande et al., ulceration accounted for 80% of patients major complaints, with patches or membranes in the throat or mouth (20%). Associated complaints included burning in the mouth (45%), constipation (41%), trismus (32%), dyspepsia (29%),

decreased appetite (27%), foul-smelling mouth (26%), difficulty swallowing (22%), bleeding from the mouth (19%), and lesions at other parts of the body (8%).

A study by Prakash et al. [3] discovered that nonspecific oral ulcerations accounted for 54% of cases in their analysis, and all of the cases were linked to burning sensations in the mouth, pain, and ulcers. In our study, 43.1% of participants had a history of smoking, 17.6% chewed tobacco, and 14.7% drank alcohol.

In contrast to those who never used these habits, a study by Gupta B. et al. revealed that the combined effects of alcohol and tobacco consumption habits increased the risk by a factor of twelve (OR=12.05; 95% 4.61-31.49). 86.8% of the population's attributable risk was accounted for by the combination of these lifestyle risk factors.

In 14 patients, tobacco chewing was present. In a study by Prakash et al., smoking history was found in 62.5%, alcohol in 50%, and tobacco and betel nut chewing in 62.5%. A study conducted by Sanjeev Tadasadmth, Syed Mushtaq, et al. [6] discovered that 16% of cases in the benign group and 32% of all cases chewed betel quid. According to a study by John S. et al. [1], the greatest percentage of patients (39) reported a history of chewing tobacco. Thirteen patients disclosed their alcohol consumption history, and eight patients had a combined history of smoking and alcohol use. A study by Sandeepchahande et al. [4] found that psychological stress (29%) and bidi/cigarette smoking (28%), followed by tobacco chewing and gutka chewing (35%), were the most common causes of oral and oropharyngeal lesions. Anemia (14%), and trauma (6%) were other causes.

The tongue accounts for 44.1% of the involvement in this study, followed by the palate (29.5%) and the buccal mucosa (15.6%). According to a study by Prakash et al. [3], patients with aphthous ulcers had a higher incidence of damage to the buccal cavity (72.2%), while patients with malignant ulcers had higher incidence of damage to the buccal mucosa (40.8%) and gingivo buccal sulcus (26.6%). According to a study by Sandeep Chahande et al. [4], oral mucosal lesions most frequently occur in the buccal mucosa (42%) with ulcers accounting for the majority of cases, followed by leukoplakia. The tongue was the next most common site of oral cavity ulcers and membrane lesions, accounting for 25% of cases. Leukoplakic plaques, malignant ulcers, and aphthous ulcers were among the lesions observed.

The retromolar triangle (4%), the anterior and posterior pillars (4%), and the gums (1%), are additional sites [6]. According to a study by John S. et al. [1], the tongue is affected 18% of the time, followed by the mucous membrane (64%) and the hard palate (19%). According to a study by Bhaskaran K et al. [5], the tongue (12%), alveolar ridge (12%), and buccal mucosa (42%) were the areas most affected.

According to a study by Syed Mushtaq, Sanjeev Tadasadmth, et al. [6], the buccal mucosa accounted for the majority of malignant oral ulcerative lesions, comprising 55.5% of the cases. The oral tongue lateral margin came in second, with 33.3% of cases.

Our research revealed that the tongue was the site of predilection for ulcero membrane lesions most frequently, the current study has revealed a higher number of cases with neoplastic etiology, which can be attributed to both chronic smoking and tobacco chewing habits. According to the current study, neoplastic etiology accounts for the largest percentage (40.1%), followed by inflammatory (32.3%), infective (20.5%), and miscellaneous (6.9%). This is in contrast to a study conducted by John S. et al. [1], which discovered that the most common etiology is neoplastic etiology, which accounts for 27% of cases, followed by traumatic (12.8%) and aphthous ulcers (15%). According to a study by Prakash et al. [3], aphthous ulcers (18%), malignant ulcers (8%), and nonspecific ulcers (54%), were the most common types of ulcers. According to a study by Thimmappa et al. [7], the majority of Nonspecific ulcers accounted for half of the common etiology, followed by aphthous ulcers (15%), traumatic ulcers (8.3%), malignant ulcers (6.5%), dental ulcers (6.5%), HIV and AIDS (3.2%), and ulcers caused by tuberculosis (3.2%). According to a study by Sandeep Chahande et al. [4], ulcers account for 80% of cases, compared to 20% for membrane lesions and 44% for chronic ulcers, of which 29.5% are malignant, 29.5% are leukoplakia, 13.6% are chronic nonspecific pathology, 9% are lichen planus, 9% are candidiasis, and 6.8% are pemphigus vulgaris.

A study by Sanjeev Tadasadmth, Syed Mushtaq, and colleagues [6] discovered that ulcerative lesions are more common (66%), with a common etiology of malignancy (33-66%), followed by benign (27-54%) and premalignant (6-12%). Our study revealed that the most common etiology was neoplastic. This could be attributed to the fact that older adults and adults are more likely to become addicted to smoking and smokeless tobacco. Additionally, because our hospital is a tertiary care facility with oncology and radiation therapy, we frequently treat a higher number of chronic ulcers than nonspecific ulcers and aphthous ulcers, which can be treated at the primary care level. In our study, 10.7% of patients received radiation therapy, 52.9% of patients received conservative care, and 36.2% of patients with neoplastic etiology underwent surgical treatment from an oncosurgery team. According to a study by Lee TL, et al., patients with oral tongue squamous cell carcinoma who respond well to induction chemotherapy may benefit from tongue conservation treatment with induction chemotherapy, followed by conservation surgery and risk-adapted adjuvant therapy. 68% of the cases in the study by John S. et al. were treated conservatively.

The symptomatic treatment of recurrent aphthous stomatitis included the use of antiseptic gargling solution, topical anesthetic agents, antacids, multivitamins, and antioxidants. Topical anesthetics and oral acyclovir were used in the treatment of 3% of patients with viral etiology.

Topical antiseptic gargling solution, topical clotrimazole and oral fluconazole were used to treat 7% of patients with oral candidiasis. Of the patients, 21% had surgery and 6% had radiotherapy. The majority of lesions observed in the study by Prakash S. H. et al. [3] were nonspecific oral ulcerations, accounting for 54% of the cases. Following symptomatic therapy based on a clinical diagnosis, these ulcers heal. In

these situations, admission and a biopsy are not necessary because patients can be treated on an outpatient basis.

In order to rule out cancer, chronic ulcers should be monitored closely and biopsied on a regular basis.

The summary of comparison of our study with various studies have been described in Table-7

Table-7: Comparison of Our Study with Other Studies

Our study	Males	65.6%
Prakash et al [3]	Males	55.5%
Bhaskaran et al [5]	Males	52%
Sandeep et al [4]	Equal	50%
John S et al [1]	Females	60%
Common symptoms		
Our study	Odynophagia	69.6%
Prakash et al [3]	Non specific ulceration	54%
Sandeep et al [4]	Burning sensation	45%
Most Common Symptom		
Our study	Smoking	43.1%
Thimmappa TD et al [7]	Smoking	49 %
Praksh et al [3]	smoking	62.5%
Syed mushtaq et al [4]	Areca nut chewing	32%
John S et al [1]	Tobacco chewing	35%
Sandeep et al [4]	Tobacco chewing	35%
Site of involvement		
Our study	Tongue	44.1%
Prakash et al [3]	Buccal mucosa	72.2%
Syed mushtaq et al [4]	Buccal mucosa	55.5%
John S et al [1]	Buccal mucosa	64%
Sandeep et al [4]	Buccal mucosa	42%
Bhaskaran et al [5]	Buccal mucosa	42%
Etiology		
Our study	Neoplastic	40.1%
John S et al [1]	Neoplastic	27%
Syed mushtaq [6]	Malignant ulcers	33-66%
Sandeep chahande et al [4]	Malignant ulcers	13%
Prakash et al [3]	Non specific ulcers	34%
Thimmappa et al [7]	Non specific ulcers	50%
Study	Results	Percentage
Age distribution		
Our study	41-60 years	45.09%
John S et. al [1]	36-55 years	34%
Prakash et al [3]	11-30 years	53.6%
Sandeep et al [4]	10-19 years	23%
Bhaskaran et al [5]	10-25 years	40%
Gender		

VI. CONCLUSION

Oral cavity and oropharyngeal ulceromembranous lesions have a variety of causes. Making an accurate diagnosis and starting treatment as soon as possible are essential to avoiding morbidity and occasionally even mortality. While aphthous ulcers are more common, our study indicated that neoplastic etiology was more common, particularly in terms of malignancy. This could be due to the fact that our hospital is a tertiary health care facility with access to oncologists and radiation therapy, as well as a large number of referrals from nearby PHC and district hospitals for biopsy and additional management, in contrast to aphthous ulcers, which can be treated at the PHC level. The incidence of cancers rises in the adult population with increased habits like smoking and chewing nicotine in any form. A high index of suspicion is therefore required when treating oral ulcers, particularly those that are chronic. The gold standard for confirming the diagnosis is always a biopsy and a histopathological examination.

REFERENCES

- [1]. John S, Muniraju M, Sreekala SS, Julie PR. A clinical study and management of ulceromembranous lesions of oral cavity. *Int J Otorhinolaryngol Head Neck Surg* 2022;8:144-9.
- [2]. Thimmappa TD, Ramesh S, Shetty HS, Gangadhara KS. A study on the clinical profile of ulcers and membranous lesions of oral cavity and oropharynx. *Int J Res Med Sci* 2014; 2:180- 5.
- [3]. Prakash S H, Shankar G. Clinicopathological study of Ulceromembranous lesions of oral cavity and oropharynx. *Perspectives in medical research* 2016; 4(3):22-26.
- [4]. Dr. Sandeepchahande, Dr Ajay kumarjaina study of aetiopathology of ulcers and membranous lesions of oral cavity and oropharynx, *jmscr*, 2018: volume 06 issue 08 august.
- [5]. Dr k.Bhaskaran , Dr Aavuluri Rajesh Kumar, an etiopathological study of ulcers and membranous lesions in oral cavity and oropharynx *international journal of scientific research* :2018: volume – 7 i issue – 1 ijanuary .
- [6]. Syed Mushtaq, Sanjeev Tadasadmth. Clinico pathological study of ulcero membranous lesions of oral cavity. *MedPulse International Journal of ENT*. June 2018; 6(3): 48-53
- [7]. Thimmappa TD, Ramesh S, ShettyHS, GangadharaKS. A study on the clinical profile of ulcers and membranous lesions of oral cavity and oropharynx. *Int J Res Med Sci* 2014;2:180-5.
- [8]. Manjunath K, Manjunath SV. Oral ulcers – a clinicopathological profile... *J.Evolution Med. Dent. Sci.* 2017;6(69):4938-4941.
- [9]. Gupta B, Kumar N, Johnson NW. Relationship of Lifetime Exposure to Tobacco, Alcohol and Second Hand Tobacco Smoke with Upper aero digestive tract cancers in India: a Case-Control Study with a Life-Course Perspective. *Asian Pac J Cancer Prev.* 2017 Feb 1;18(2):347-356.
- [10]. Lee TL, Wei PY, Yang MH, Chang PM, Wang LW, Tai SK. Tongue conservation treatment for oral tongue squamous cell carcinoma with induction chemotherapy, surgery, and risk adapted adjuvant therapy: A phase II trial. *Cancer Rep (Hoboken)*. 2022 Feb;5(2):e1456.