

Clinicopathological Correlation Of Ulceroproliferative Lesions -An Institution Based Retrospective Study

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Abstract:

Background: Ulcero-proliferative lesions are both benign and malignant. They are versatile and can be acute or chronic, solitary or multiple, small in size or large. They occur as a result of traumatic insults, bacterial or viral infections and can also be due to post chemotherapy effects. **AIM:** The aim of the study is to determine the clinicopathological correlation of various ulcero-proliferative lesions of the oral cavity of north coastal region of Andhra Pradesh. **OBJECTIVES:** 1. To evaluate various ulcero-proliferative lesions in the oral cavity based on the demographic details. 2. To correlate the demographic and histopathological features of the ulcero-proliferative lesions.

Materials and Methods: The study was done retrospectively in the Oral Pathology Department, of GITAM Dental College and Hospital from the archives of the past 5 years. The clinical and the histopathological features of both benign and malignant lesions are collected and are comprehensively studied. The collected data included age, gender, histopathological diagnosis were arranged in tabulated form.

Results: In a total of 936 cases in the 5 year archival a significant number of cases (42%) were ulceroproliferative which are further divided into benign (33%), premalignant (19%), malignant (48%). Males (51.3%) and females (48.7%) showed various ulceroproliferative lesions. Benign and premalignant lesions had a higher female predominance whereas malignant had a higher male predominance.

Conclusion: Oral squamous cell carcinoma is the predominant ulcero-proliferative lesion in our study. We have also noticed a slight increase in the prevalence of both premalignant and malignant ulcero-proliferative lesions which might be due to changing lifestyle patterns in the individuals. Ulcero-proliferative lesions of the oral cavity are commonly associated with adverse habits. Further lesions can be evaluated based on the origin, either epithelial or salivary gland origin followed by a detailed follow up of the patient in prospective manner to evaluate other associated risk factors.

Key Word: squamous cell carcinoma, TUGSE, ulcerated fibroma, mucoepidermoid carcinoma.

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I. Introduction

Ulceroproliferative lesions are a group of versatile lesions with various etiological factors like trauma, bacterial or viral infections, nutritional deficiencies, post chemotherapeutic effects, deleterious habits or genetic defects. They are either acute or chronic, benign or malignant, solitary or multiple and also shows variation in size ranging from a few millimeters to centimeters.¹

Aim: the aim of the study is to determine the clinicopathological correlation of various ulcero-proliferative lesions of the oral cavity of north coastal region of andhra pradesh.

Objectives:

1. To evaluate various ulcero-proliferative lesions in the oral cavity based on the demographic details of the lesions.
2. To correlate the demographic and histopathological features of the ulcero-proliferative lesions.

II. Material And Methods

We have collected a total of 936 cases from 5 year (2018-2023) archives from the Department of Oral Pathology and Microbiology, GITAM Dental College and Hospital, Visakhapatnam, Andhra Pradesh. Out of the 936 cases 666 cases were diagnosed as ulceroproliferative lesions. The diagnosis is made based on the clinical details like age, gender, location, medical history, radiographical features and confirmed by histopathological correlation. Individuals of the age group 18 and above were included in the study and below 18 years were excluded. All the details were collected, analyzed and tabulated.

Study Design: Retrospective study

Study Location: This was a teaching and hospital based study done in Department of Oral Pathology and Microbiology, at GITAM Dental College & Hospital, Rushikonda, Visakhapatnam, Andhra Pradesh.

Study Duration: January 2018 to December 2023.

Sample size: 936 cases.

Sample size calculation: The sample size was estimated on the basis of a single proportion design. The target population from which we randomly selected our sample was considered 936. We included 936 cases which later fall into benign, premalignant and malignant groups.

Subjects & selection method: The study population was collected from patients who presented to Department of Oral Pathology and Microbiology, GITAM Dental College & Hospital. Among 936 cases, 666 were ulceroproliferative in nature. The subjects with ulceroproliferative lesions were diagnosed as benign, premalignant and malignant based on their clinical features along with the histopathological features. According to the diagnosis the subjects with benign lesions were (33%), premalignant (19%), malignant (48%).

Inclusion criteria:

1. Patients who have been advised biopsy from various departments like Oral and maxillofacial surgery, Oral medicine & Radiology, Periodontology.
2. Either sex
3. Aged \geq 18 years
4. Patients with history of deleterious habits like alcohol, smoking.

Exclusion criteria:

1. Pregnant women
2. Patients with genetic disorders
3. Patients with recurrent lesions.
4. Patients who have undergone chemotherapy, radiotherapy.
5. Patients who are physically inactive.

Procedure methodology

We have collected a total of 936 cases from 5year (2018-2023) archives from the Department of Oral Pathology and Microbiology, GITAM Dental College and Hospital, Visakhapatnam, Andhra Pradesh. Out of the 936 cases 666 cases were diagnosed as ulceroproliferative lesions. The diagnosis is made based on the clinical details like age, gender, location, medical history, radiographical features and confirmed by histopathological correlation. Individuals of the age group 18 and above were included in the study and below 18 years were excluded. All the details were collected, analyzed and tabulated.

III. Result

Based on our observation, the results revealed that in a total of 936 cases in the 5year archives a significant number of cases (42%) were ulceroproliferative which are further divided into benign (33%), premalignant (19%), malignant (48%). Males (51.3%) and females (48.7%) showed various ulceroproliferative lesions. Benign and premalignant lesions had a higher female predominance whereas malignant had a higher male predominance. Malignant lesions were commonly seen in the older age group individuals of 61-70 years, premalignant were seen in 51- 60 years of age whereas benign lesions were seen in the 20-40 years of age. Benign lesions were mostly seen on the gingiva followed by the hard palate. Premalignant lesions were mostly seen on the tongue followed by buccal mucosa. Floor of the mouth is negative for both benign as well as premalignant lesions. Malignant lesions were mostly seen on the tongue, followed by buccal mucosa, hard palate, gingiva, retromolar area and a few cases were reported on the floor of the mouth too.

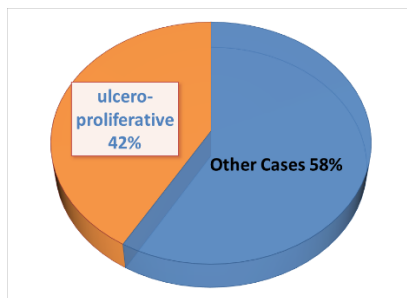


Fig.1 Representation of ulceroproliferative lesions percentage.

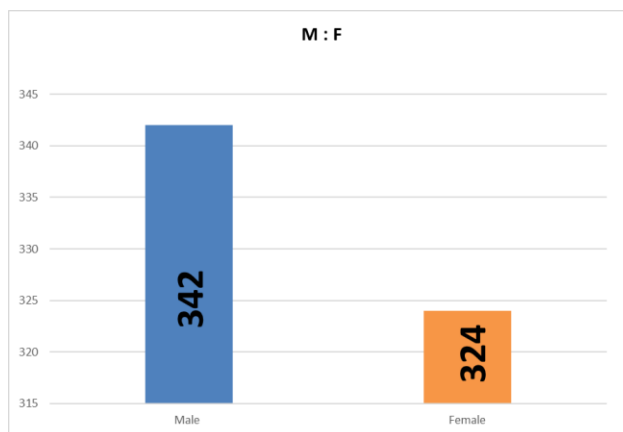


Fig 2. Number of males and females affected

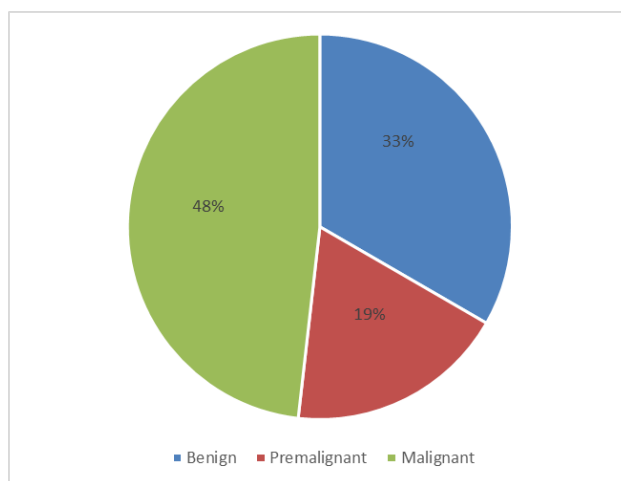


Fig 3. Distribution of benign, premalignant and malignant ulceroproliferative lesions

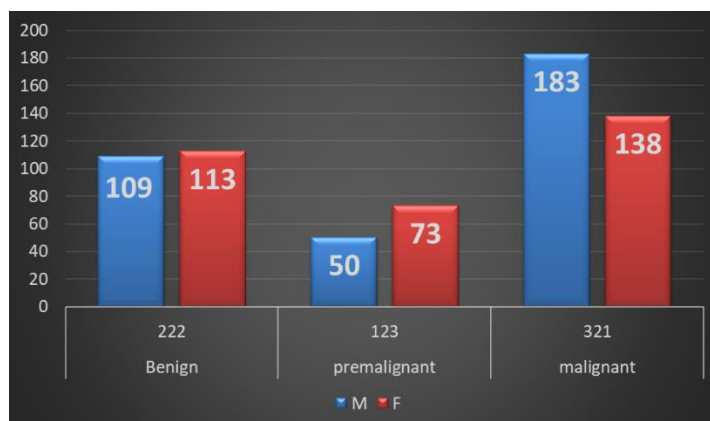


Fig 4. Graphical representation of gender prevalence

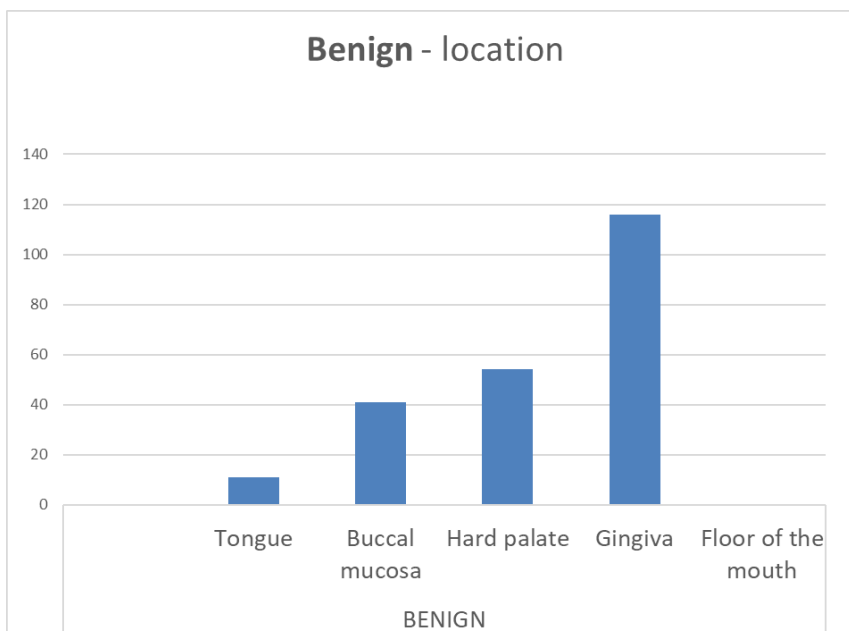


Fig 5. Graphical representation of benign lesions based on location.

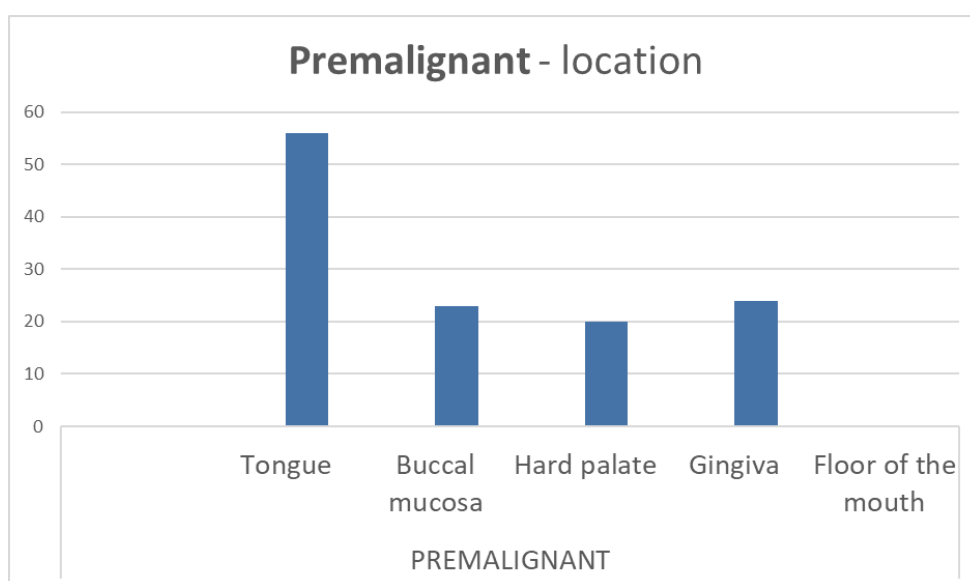


Fig 6. Graphical representation of premalignant lesions based on location.

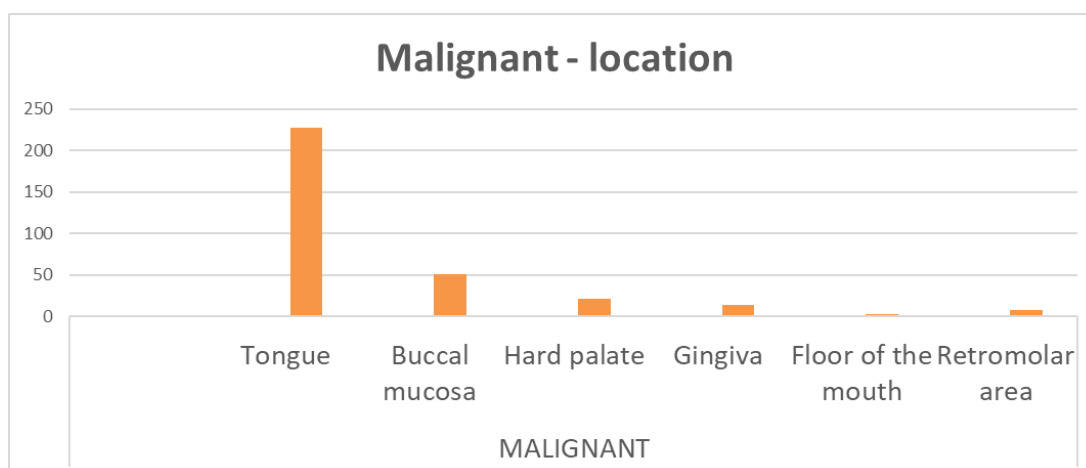


Fig 7. Graphical representation of malignant lesions based on Location.

IV. Discussion

Oral disease usually manifests either of the following: 1) Change in colour, 2) ulcers, 3) swelling, 4) ulceroproliferative, 5) vesiculo-bullous or 6) surface textural changes. Our interest of discussion in this article is ulceroproliferative lesions². In a total of 936 cases in the 5year archival a significant number of cases (42%) Fig.1 were ulceroproliferative which are further divided into benign (33%), premalignant (19%), malignant (48%) Fig.3. Males 342 (51.3%) and females 324 (48.7%) Fig.2 showed various ulceroproliferative lesions. Benign and premalignant lesions had a higher female predominance whereas malignant had a higher male predominance Fig.4. The most prevalent ulceroproliferative lesion is squamous cell carcinoma³ which is our finding too (178 males, 117 females) encountered on the tongue, buccal mucosa, palate Fig.7 and the patients associated gave a history of reverse smoking (96), khaini (74), Chutta (70), gutka (54). Oral squamous cell carcinoma because of its grave prognosis should be diagnosed at the earliest and should be differentiated from other immunologically mediated ulcerations, viral or bacterial induced⁴. Followed by fibromas (98 males, 28 females) on the lower lip, buccal mucosa Fig.5 without any deleterious habits and premalignant conditions like smoker's palate, leukoplakia which included all grades of epithelial dysplasia. The common causative agents of epithelial dysplasia are Reverse smoking (31), gutka (28), cigarette + alcohol (64). Clinically, the lesions vary from a few millimeters to centimeters, ulcerated, showing proliferation with or without any discharge. Benign lesions in our study were in accordance with the findings of Ghai S et al 2022, individuals of the age group 20-40 years are most commonly affected⁵ whereas Shamim et al stated that benign ulceroproliferative lesions showed a wide age distribution 10-19 years followed by 40-49 years and 50-59 years. In gender distribution females were commonly affected than males which is in accordance with Manjunatha et al 2014. Blochowiak et al 2019 stated that lower lip is most commonly affected, but in our study we have found that gingiva is mostly affected⁶. In premalignant lesions Singh et al 2021 stated that the prevalence was 13.2% – 13.9%,⁷ which is found to be increased to 16% in our study. He also stated that males and individuals of 30-40 years were more affected but we found females to be more commonly affected and individuals of 51-60 years were more affected with premalignant lesions. Malignant lesions were frequently seen in males according to Borse et al 2020, commonly affecting the tongue and individuals of 60 – 69 years of age. He observed at prevalence percentage of 31.45%⁸ whereas we observed a slightly increased value of 33%. Various ulceroproliferative lesions are associated with several etiological factors and their close resemblance with each other makes it difficult for their diagnosis, hence histopathological examination is the gold standard procedure for their diagnosis.

The limitations of our study are the origin of the lesion is not taken into consideration, and the risk factors and other systemic conditions of the patient associated with the disease were not evaluated which could be done if the study was done in prospective manner.

V. Conclusion

Oral squamous cell carcinoma is the predominant ulcero-proliferative lesion in our study. We have also noticed a slight increase in the prevalence of both premalignant and malignant ulcero-proliferative lesions which might be due to changing lifestyle patterns in the individuals. Ulcero-proliferative lesions of the oral cavity are commonly associated with adverse habits.

Further lesions can be evaluated based on the origin, either epithelial or salivary gland origin followed by a detailed follow up of the patient in prospective manner to evaluate other associated risk factors.

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