



AETIOPATHOLOGICAL STUDY OF ULCERS AND MEMBRANOUS LESIONS IN ORAL CAVITY AND OROPHARYNX

DR. RUCHI VERMA

ASSISTANT PROFESSOR, DR. B.R. AMBEDKAR MEDICAL COLLEGE, BANGALORE

DR. MOHAMMED SAIFULLA

JUNIOR RESIDENT, DR. B.R. AMBEDKAR MEDICAL COLLEGE, BANGALORE

ABSTRACT

Oral cancer most commonly occurs in middle-aged and older individuals, although a disturbing number of these malignancies is also being documented in younger adults in recent years. From an epidemiological and clinicopathological point of view, oral cancer can be divided into three categories: carcinomas of oral cavity proper, carcinomas of the lip vermilion & carcinomas arising in the oropharynx. Intraoral and oropharyngeal tumors are twice as more common in men than in women(1). Many aetiological factors contribute to the development of oral and oropharyngeal lesions and malignancies such as the use of all forms of tobacco, alcohol consumption, viruses, nutritional factors, poor oral hygiene, chronic inflammation and repeated traumatic irritation (2,3). Many genetic and idiopathic factors may also predispose to development of oral cancers. A cross sectional study was undertaken between January 2015 and January 2017 consisting of 100 patients who underwent clinical assessment, examination and laboratory investigations to list out the aetiological factors contributing to oral cancer.

KEYWORDS

oral cavity ; oropharynx ; malignancy ; tobacco ; smoking

INTRODUCTION

The oral cavity consists of the lips, teeth, gums, oral mucous membrane, palate, tongue and oral lymphoid system. The oral cavity plays an essential role in many key bodily functions, including nutrition (mastication and swallowing), respiration and communication. Various specialists may be called upon to diagnose and treat diseases of the oral cavity, including general practitioners, oral surgeons, otolaryngologists and others. The most important diagnostic tools for the examination of the mouth are the examiner's eyes aided by source of illumination, a tongue depressor and the use of palpation by the examiner's glove covered fingers. Whilst most diseases of oral cavity can be diagnosed by visual inspection, some disorders may be perplexing and their diagnoses may be elusive. Many disease processes, benign or malignant, localized or systemic, may present as an ulcerative lesion in the oral cavity. The list of possible diseases that may present as an ulcerative lesion in the oral cavity is quite extensive. The focus here will be on the most common causes of these lesions. Included are acute and chronic processes, benign and malignant diseases, generalized and systemic manifestations of ulcerative lesions in the oral cavity. The study is an attempt to enumerate the aetiopathological factors contributing to oral and oropharyngeal lesions.

AIMS AND OBJECTIVES

1. To study the aetiopathological factors which predispose to oral and oropharyngeal lesions.
2. To study the correlation between etiological factors & histopathological findings of oral and oropharyngeal lesions.

MATERIAL & METHODS

All the cases with oral and oropharyngeal lesions who presented to us between January 2015 and January 2017 (100 cases) in the ENT OPD of Dr. B.R. Ambedkar Medical College were studied (either their first presentation to us or after undertaking biopsy elsewhere). All the patients in the study were clinically evaluated by taking detailed history and clinical examination. They were questioned about their habits of tobacco use, alcohol consumption, history of radiotherapy and dietary habits.

They were also questioned and examined about the symptoms, signs and past history of Vitamin A deficiency, Plummer-Vinson syndrome, poor oral hygiene, oral candidiasis, oral lichen planus and chronic irritation.

Inclusion criteria:

-All cases attending the ENT OPD with ulcers and membranous lesions of oral cavity & oropharynx

- Aged 10-60 years
- Both males and females

Exclusion criteria:

- Congenital conditions
- Patients below 10 years and above 60 years

OBSERVATION & RESULTS

Table 1 : Sex distribution

Sex	Number	Percentage
Male	52	52
Female	48	48

Out of total 100 patients, our study had 48 females & 52 males.

Table 2 : Age distribution

Age	Number	Percentage
10-25	40	40
26-35	32	32
36-45	18	18
46-60	10	10

The mean age of our patients was 28.8 years, ranging from 10 years to 60 years; with almost 75% between 15 and 35 years.

Table 3 : Duration of symptoms

Duration (months)	Number	Percentage
0-2	60	60
2-4	30	30
4-6	10	10

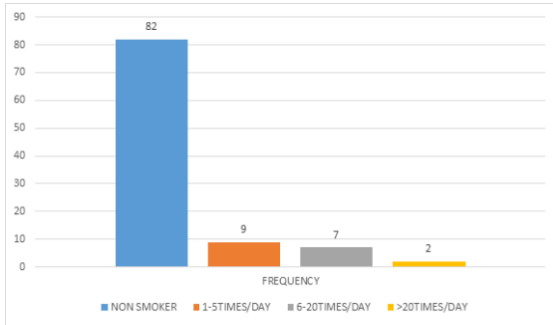
Duration varies from a minimum of 1 day to a maximum of 6 months

Chart 4 : Diet



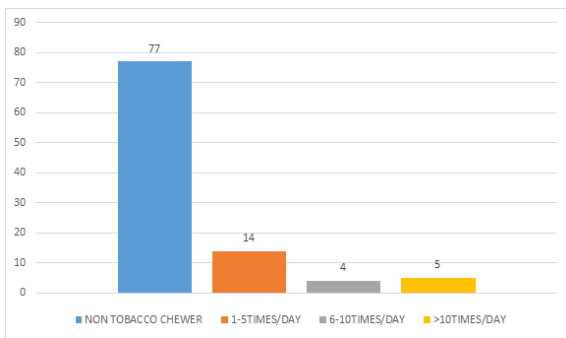
77 patients among 100 consumed mixed diet & 23 patients were vegetarian

Chart 5 : Habit of smoking



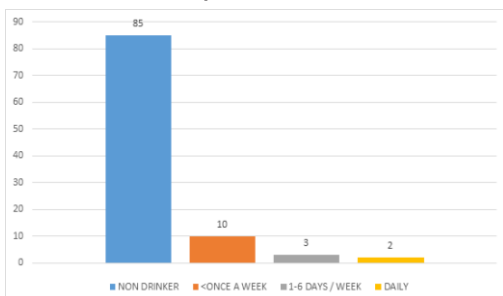
Out of 100 patients, 82 were non smokers and 18 were smokers

Chart 6 : Habit of tobacco chewing



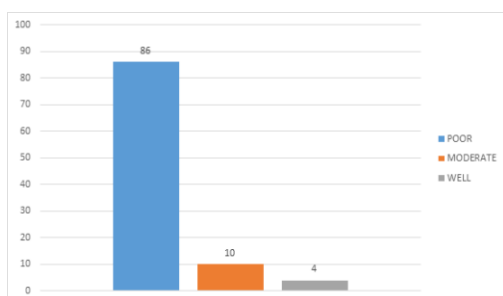
Out of 100 patients, 77 were non tobacco chewers and 23 had habit of tobacco chewing

Chart 7 : Alcohol consumption



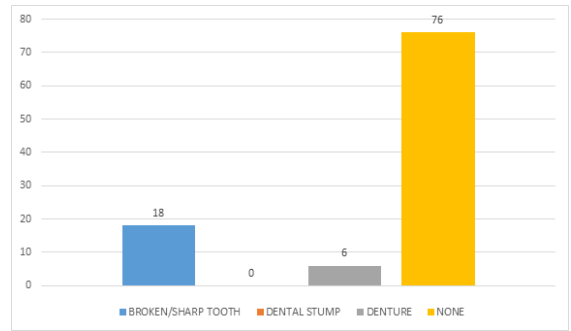
Out of 100 patients, 85 were non alcoholics and 15 alcoholics

Chart 8 : Oral hygiene



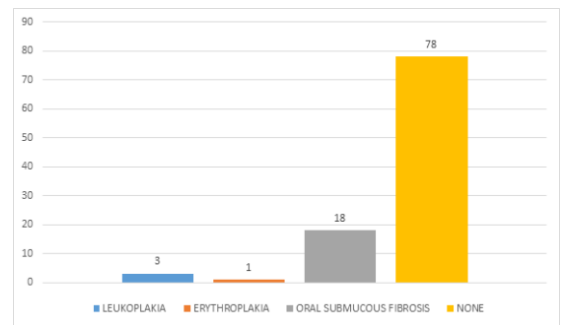
Out of 100 patients, 86 had poor oral hygiene

Chart 9 : Chronic traumatic irritation



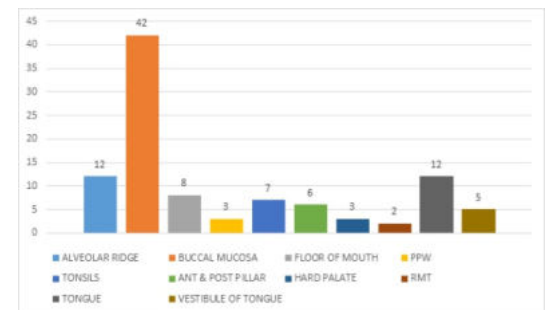
Out of 100 patients, 18 patients had sharp/broken tooth and 6 were using dentures

Chart 10 : Pre malignant lesions



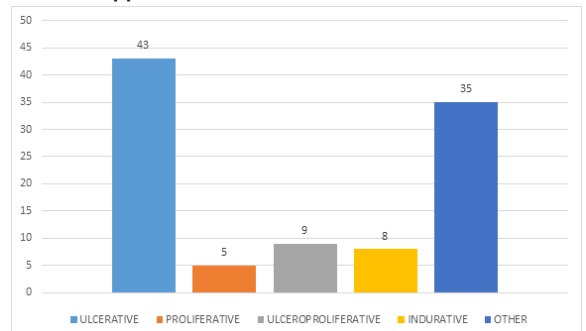
Out of 100 patients, 18 had submucous fibrosis, 3 had leukoplakia and 1 had erythroplakia

Chart 11 : Site of lesion



In our study, most common site was buccal mucosa followed by tongue and alveolar ridge

Chart 12 : Appearance of lesion



In our study, ulcerative type of growth was the most common followed by ulceroproliferative

DISCUSSION

The most common type of malignancy in the upper aerodigestive tract is squamous cell carcinoma around 96-98%. The highest incidence of tongue cancer occurs in the 6th to 8th decade. Carcinomas of oral cavity and oropharynx are most commonly found in patients above 40 years of age. In our study age of the patients varied from 10-60 years, highest number of cases were found to be in 5th to 6th decades. In developed countries, men are affected 2-3 times more often than women. In our study, we did not find any differences in sex distribution.

Social factors and lifestyle have a major impact on the development of oral cancer. Dietary factors like vegetables, fish and pulses have a protective effect against aerodigestive cancers. Low level of fat consumption was associated with elevated risk levels (6). The intake of these dietary factors as well as vitamins is low in the poor socioeconomic class. In our study, majority of the patients (86%) had low socioeconomic status. In terms of diet, 77% had mixed dietary habits and 33% were vegetarians. The most frequent complaint was soreness or irritation in the mouth. Early symptoms include painless swelling which may get ulcerated causing pain. In our study, patient came with complaints of painful ulcer in the mouth. 10% cases had a painless swelling in the mouth and 4% presented with trismus.

It is estimated that among the 400 million individuals aged 15 years and above in India, 47% use tobacco in one form or the other. In our study, 18% of the patients were smokers, out of which 2% were heavy smokers (>20 cigarettes/day). We observed that 23% of the patients had a habit of tobacco chewing, among which 64% were males & 36% were females. Recent studies have shown that heavy drinkers possess a 40-fold increased risk of oral cancer. Five patients in the present study of 100 patients with diagnosed oral cancer consumed alcohol. Poor oral hygiene is associated with a higher incidence of oral cancer. 86% of the patients in our study had poor oral hygiene. Iron deficiency is associated with elevated risk of squamous cell carcinoma. Also, the role of viruses like Human Papilloma Virus is implicated with a high risk of cancers in oral cavity (7). Out of 100 cases, 3 patients were suffering from iron deficiency, 14% had some kind of traumatic irritation, none had any history of radiation therapy. Three had a habit of mouthwash gargling. The prevalence of leukoplakia in India varies from 0.2% to 4.9% and that of oral submucous fibrosis is 0.4% (8). In our study, 2 cases had leukoplakia and 18 cases had oral submucous fibrosis. The most common site of oral cancer in our study was the tongue, followed by hard palate, buccal mucosa, alveolar ridge, retromolar trigone, floor of mouth & vestibule (9). The most common appearance of growth in malignancies was found to be ulceroproliferative followed by ulcerative, proliferative & indurative.

By far the most common type of malignancy of upper aerodigestive tract is squamous cell carcinoma. The well differentiated form of squamous cell carcinoma are typically composed of large closely apposed cell nests. Keratinization is prominent, often with keratin pearl formation. Moderately differentiated squamous cell carcinoma consists of smaller nests of more pleomorphic cells with mitotic activity & clear cut, but often less prominent squamous differentiation.

We have found that the incidence of tongue cancer was 50% among alcohol consumers and 18% in non-smokers ($p < 0.05$) and tongue was the site of malignancy in 57% of smokers and only 12% of non-smokers ($p < 0.05$). Hence, it can be concluded that smoking and alcohol consumption significantly increase the risk of tongue cancer in particular.

CONCLUSION

Tobacco in either form (smoking or chewing), alcohol consumption, iron deficiency anemia, chronic traumatic irritation and poor oral hygiene seem to be the most important aetiological factors in the development of oral and oropharyngeal malignancy. The early identification of the individuals with the predisposing risk factors and to educate them about the associated hazards is of

immense value in the prevention of oral malignancy and its mortality.

REFERENCES

- 1) American cancer society, cancer facts and figures 2002. Atlanta,GA: American Cancer Society;2002
- 2) Silverman S Jr, Shillitoe EF. Etiology and Predisposing factors. In: Silverman S Jr ed. Oral Cancer, 4th ed. Hamilton, Ontario, Canada: BC Decker Inc; 1998, 7-24
- 3) Andre K ,Schraub S, Mercier M,et al. Role of alcohol and tobacco in aetiology of Head and Neck cancer: A case control study in the Dobsregion of France. Oral oncol, Eur J cancer 1995; 31B: 301-309
- 4) Watts JM. The importance of the Plummer Vinson syndrome in the etiology of carcinoma of the upper gastrointestinal tract . Postgrad med J 1961;37:523-533
- 5) Eisenberg E. Oral Lichen planus: A benign lesion. J oral maxillofacial Surgery 2000;58;1278-1285
- 6) Winn DM. Diet and nutrition in the aetiology of oral cancer.Am J clin nutr 1995; 61:437S-445S
- 7) Sugerman OB, Shillitoe EJ. The high risk human papilloma viruses and oral cancer: evidence for and against causal relationship. Oral Dis 1997;3:130-147
- 8) Pindborg JJ, Murti PR, Bhonsle RB, et al. Oral submucous fibrosis as a precancerous condition. Scand J Dent Res 1984;92:224-229
- 9) Jovanic A, Schultren EA, Kostense PJ, et al. Tobacco and alcohol related to the anatomical site of oral squamous cell carcinoma. J oral pathology med 1993;22:459-462