

## Original Article

### Assessment of Role of Oral habits on Oral cancer- A Clinical Study

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#### ABSTRACT:

**Background:** Oral cancer is a malignant neoplasm that may affect the oral cavity. The most affected sites are tongue, floor of mouth, and lower lip. The present study was conducted to determine effects of or habits on oral cancer. **Materials & Methods:** The present study was conducted on 863 subjects of both genders. Cases of leukoplakia and erythroplakia were selected. General information such as name, age, gender etc. was recorded. Habits history such as smoking and alcohol was obtained. **Results:** 287 patients had habit of alcohol intake, 103 had disease. 387 patients had habit of smoking, 250 had disease. 189 patients had tobacco usage habit, 90 had disease. Age group 20-30 years, 71 had habit of alcohol, smoking (75) and tobacco (45), age group 30-40 years had habit of alcohol (72), smoking (80) and tobacco (70), age group 40-50 years had habit of alcohol (72), smoking (80) and tobacco (70), age group 50-60 years had habit of alcohol (84), smoking (116) and tobacco (37). Out of 287 patients 81 had erythroleukoplakia, out of 387, 113 had disease and out of 189 cases 9 had disease. Out of 287 patients 22 had erythroleukoplakia, out of 387, 137 had disease and out of 189 cases 81 had disease. **Conclusion:** Both Smoking tobacco and alcohol intake leads to oral cancer. Smoking and alcohol are major risk factor for leukoplakia and erythroplakia.

**Key words:** Alcohol, Leukoplakia, Tobacco.

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#### INTRODUCTION

Oral cancer is a malignant neoplasm that may affect the oral cavity. The most affected sites are tongue, floor of mouth, and lower lip. The most common histologic type is squamous cell carcinoma (SCC), which corresponds to the range of 90 – 95% of all oral cancers. This tumor predominates in male subjects, and the majority of cases occur between 50 and 70 years of age, with a higher prevalence in leucoderma individuals.<sup>1</sup>

Many people use and abuse both alcohol and tobacco, and their combined effects on cancer risk also have been widely investigated. Both alcohol and tobacco use are associated with numerous adverse health consequences, including an increased risk of certain types of cancer. For example, epidemiological studies found that alcohol consumption can increase the risk for cancers of the upper aero-digestive tract, stomach, large bowel (i.e., colon and rectum), liver, and breast, with higher levels of consumption leading to greater increases in risk. Similarly, tobacco use is associated

with an elevated risk of lung cancer, as well as of cancers of the upper aero-digestive tract, bladder, kidney, pancreas, stomach, and cervix and a certain type of leukemia.<sup>2</sup>

The oral cancer causative agents are multifactorial, with alcohol and tobacco being the most important risk factors. Besides these factors, an excessive sun exposure without an appropriate protection over the years constitutes a considerable risk factor for oral cancer, especially on the lips. Other factors such as human papillomavirus (HPV), diet and occupation have been studied in order to investigate their implications on oral carcinogenesis. The results seem to indicate a connection between these factors and oral cancer.<sup>3</sup> The present study was conducted to determine effects of or habits on oral cancer.

#### MATERIALS & METHODS

The present study was conducted on 863 subjects of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior

to the study. Cases of leukoplakia and erythroplakia were selected. General information such as name, age, gender etc. was recorded. Habits history such as smoking and alcohol

was obtained. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

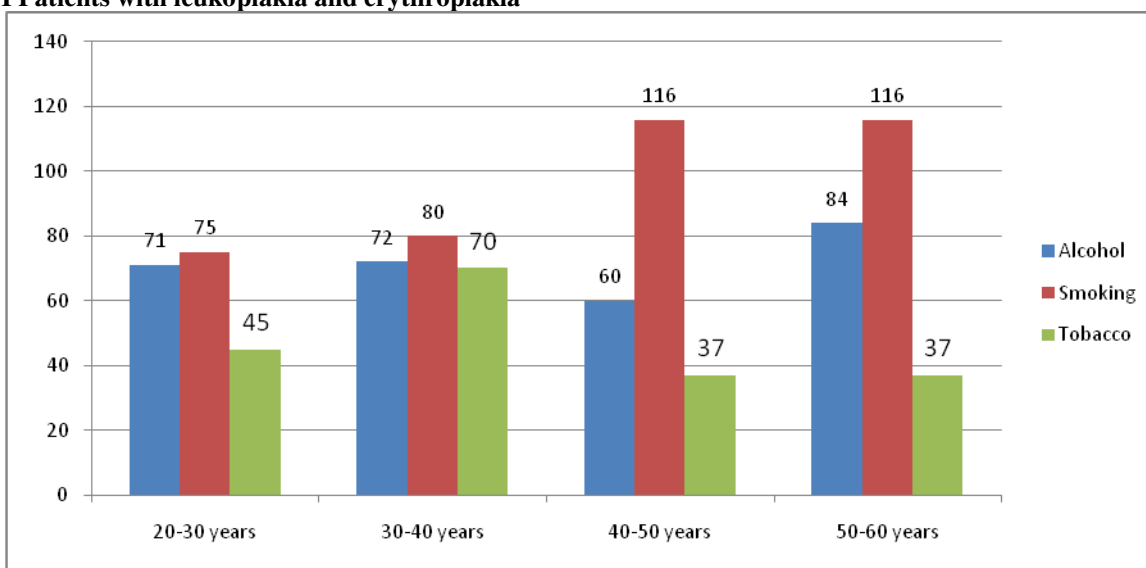
**RESULTS**

**Table I**

Habit	No. of patients	Disease	Healthy
Alcohol	287	103	184
Smoking	387	250	137
Tobacco	189	90	99
<b>Total</b>	<b>863</b>	<b>443</b>	<b>420</b>

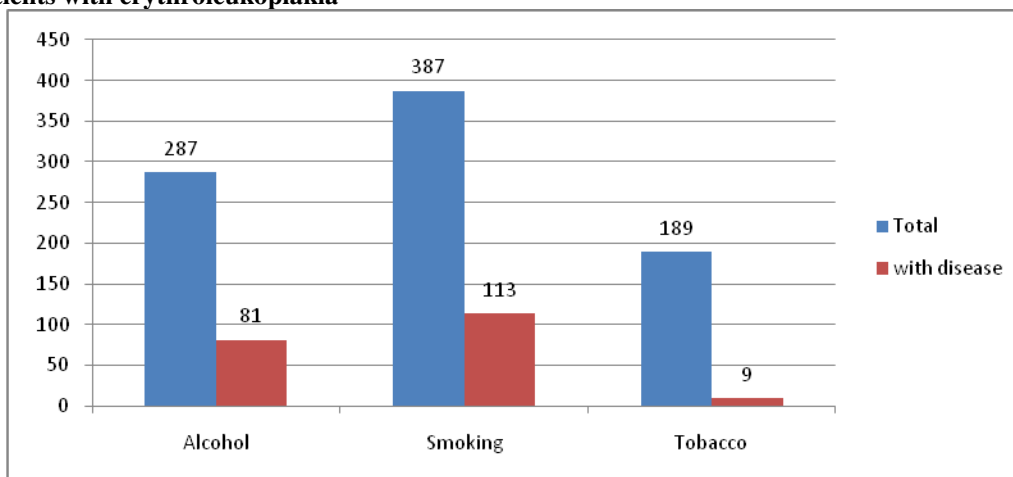
Table I shows that 287 patients had habit of alcohol intake, 103 had disease while 184 were healthy. 387 patients had habit of smoking, 250 had disease and 137 were healthy. 189 patients had tobacco usage habit, 90 had disease and 420 were healthy.

**Graph I Patients with leukoplakia and erythroplakia**



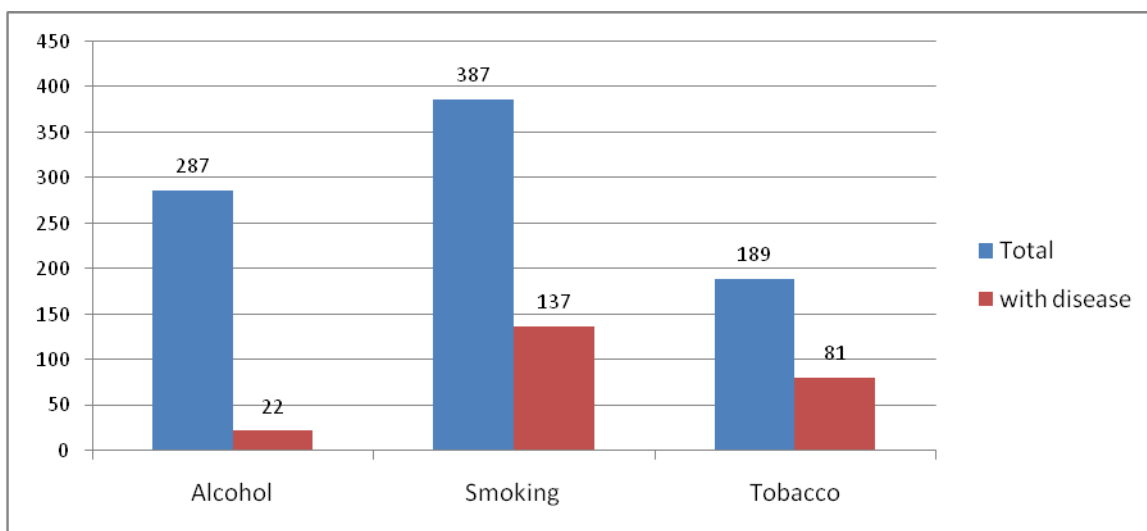
Graph I shows that in age group 20-30 years, 71 had habit of alcohol, smoking (75) and tobacco (45), age group 30-40 years had habit of alcohol (72), smoking (80) and tobacco (70), age group 40-50 years had habit of alcohol (60), smoking (116) and tobacco (37), age group 50-60 years had habit of alcohol (84), smoking (116) and tobacco (37).

**Graph II Patients with erythroleukoplakia**



Out of 287 patients 81 had erythroleukoplakia, out of 387, 113 had disease and out of 189 cases 9 had disease.

**Graph III Patients with leukoplakia**



Out of 287 patients 22 had erythroleukoplakia, out of 387, 137 had disease and out of 189 cases 81 had disease.

**DISCUSSION**

The risk of oral and pharyngeal cancer also is strongly related to smoking. For example, the study conducted in Italy and Switzerland mentioned earlier also demonstrated that nondrinkers who smoked 25 or more cigarettes per day had a seven-fold increased risk of oral and pharyngeal cancer compared with nonsmokers. The risk of oral and pharyngeal cancer is increased in smokers of all tobacco products, with a higher risk found in smokers of cigarettes without filters than in smokers of cigarettes with filters. In addition, some studies observed a stronger association between smoking and cancer in smokers of pipes and cigars than in smokers of cigarettes.<sup>4</sup>

We found that 287 patients had habit of alcohol intake, 103 had disease while 184 were healthy. 387 patients had habit of smoking, 250 had disease and 137 were healthy. 189 patients had tobacco usage habit, 90 had disease and 420 were healthy.

The effect of combined exposure to alcohol and tobacco on risk of oral and pharyngeal cancer appears to be multiplicative—that is, the risk of combined exposure is the product of the increases in risk associated with exposure to either habit. Some studies found even greater (i.e., supra-multiplicative) increases in risk associated with combined exposure to alcohol and tobacco. For example, Zheng et al<sup>5</sup> demonstrated that people who drank heavily and smoked had a 300-times higher risk of these cancers than people who neither drank nor smoked.

Narija et al<sup>6</sup> found that off the entire sample, 279 were smokers and 73 non-smokers. Oral leukoplakia was found in 53 subjects and among them 50 were smokers and 3 were non- smokers. All smokers had only used cigarettes. The relative risk of developing oral leukoplakia increased with duration of cigarette smoking habit. The majority of smokers with leukoplakia (74.0%) smoked more than 20

cigarettes per day compared to 34.5% of those without leukoplakia. The highest prevalence of leukoplakia (33.3%) was found in subjects who used cigarettes and alcohol.

Erythroplakia is an uncommon but severe disease, defined by WHO as “any lesion of the oral mucosa that presents as bright red velvety plaques which cannot be characterized clinically or pathologically as any other recognizable condition”. An updated definition for erythroplakia was as “a chronic red mucosal macule which cannot be given another specific diagnostic name and cannot be attributed to traumatic, vascular, or inflammatory causes”.<sup>7</sup>

We found that Out of 287 patients 81 had erythroleukoplakia, out of 387, 113 had disease and out of 189 cases 9 had disease. Out of 287 patients 22 had erythroleukoplakia, out of 387, 137 had disease and out of 189 cases 81 had disease. This is in agreement with Stalin et al.<sup>8</sup>

Hashibe et al<sup>9</sup> found that the adjusted OR for erythroplakia was 19.8 (95% CI, 9.8–40.0) for individuals who had ever chewed tobacco, after controlling for age, sex, education, body mass index, smoking, and drinking. The adjusted OR for ever-alcohol-drinkers was 3.0 (95% CI, 1.6 –5.7) after controlling for age, sex, education, body mass index, chewing tobacco, and smoking. For ever smokers, the adjusted OR was 1.6 (95% CI, 0.9 –2.9). A more than additive interaction on the risk of erythroplakia was suggested between tobacco chewing and low vegetable intake, whereas a more than multiplicative interaction was indicated between alcohol drinking and low vegetable intake, and between drinking and low fruit intake.

**CONCLUSION**

Both Smoking tobacco and alcohol intake leads to oral cancer. Smoking and alcohol are major risk factor for leukoplakia and erythroplakia.

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