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# Prevalence of Nicotina-Stomatitis Among 320 Smokers In Chennai Population

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**The aim of this study was to investigate the prevalence of nicotina stomatitis in various areas of Chennai population The study sample consisted of 320 known smokers, who were randomly selected from Chennai population. The data of nicotina stomatitis were obtained by a self administered questionnaire. From the study it was found that main reason for nicotina stomatitis is smoking more than 15 Cigarettes/beedies per day for 20-30 years. It was found that prevalence of nicotina stomatitis was predominant in 40-50years than other age groups. This study conclude that majority of smokers use filter cigarettes and they use 10-15 cigarettes per day and majority of people smoke for 5-10years.**

**Key words**: Nicotina stomatitis, Smoking, Cigarette, Palatal mucosa.

Stomatitis is an inflammation of the mucous lining of any of the structures of the mouth, which may involve the cheeks, gums, tongue, lips, throat, and roof or floor of the mouth. A form of stomatitis known as stomatitis nicotina can be caused by smoking cigarettes, cigars, pipes and it is charecterised by small red bumps on the roof of the mouth[11]. Nicotina stomatitis is an pathologic condition that appear in the hard palate of the mouth as a white lesion . The frequency of this condition depends on society's use of consuming hot beverages and of smoking in its various forms. It is more commonly found in men over 45 years of age, it is characterized as 'fissured' or "dried mud ' appearance from excess keratin production by cells. Nicotinic stomatitis is usually diagnosed when the entire palatal mucosa is diffusely whitish and thickened, and occasional small nodular growths each with a central red dot occur on the affected part. The palatal changes of nicotina stomatitis exhibit greater variations,the entire palate is not always affected, and the small red dots are not present in all cases[4].

Nicotina stomatitis is considered to be a precancerous lesion in smokers[6]. Nicotina stomatitis should completely resolve on its own after 1-2 weeks upon termination of smoking. If the lesion persists, a biopsy may be done to confirm diagnosis. Nicotina stomatitis is a clinical term despite its name, it is likely caused

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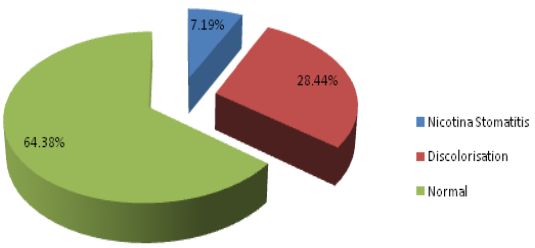
by the tars and heat in tobacco smoke and not the nicotine. Initially the palatal mucosa responds to cigarette smoking with redness later it becomes wrinkled and takes a diffuse whitish-grey color with numerous micronodules of inflamed and dilated salivary gland ducts. Apart from collecting data regarding nicotina stomatitis this study also created awareness about the ill effects of smoking in chronic smokers.

## MATERIALS AND METHODS

This study was conducted to determine the smoking habits and the occurrence of nicotina stomatitis in different types of smokers. The study sample consisted of 320 smokers who were randomly selected from Chennai population. The data of nicotina stomatitis were obtained by a self administered questionnaire, following this an intraoral examination of the palate was done using a mouth mirror. All the collected data were subjected to statistical analysis

## RESULTS

The study on prevalence of nicotina stomatitis was conducted for 320 smokers of Chennai population. They were categorized based on age groups 20-70 years. Among the population 7.91% showed positive cases of nicotina stomatitis and 28.44% of them had discoloration(Graph 1). Among the 7.91%, 62% of patients were beedi smokers, 24% of patients were cigarette smokers, 14% had both habits. From the study it was found that main reason for nicotina stomatitis is smoking more than 15 beedies per day for 20-30 years. It was found that prevalence of nicotina stomatitis was predominant in 40-50years than other age groups.




**Graph 1.**

## DISCUSSION

Nicotina stomatitis is extensive leathery, white change of the hard palate in smokers with numerous red papules, which represent inflamed salivary duct opening the frequency of this condition depends on society's use of consuming hot beverages and of smoking in its various forms[1]. Nicotina stomatitis was first described by thoma et al in cigar smokers[13], a mucosal lesion of hard palate, where papular elevations have central umblications with or without pigmentation. It has become a rarity as cigar and pipe smoking have lost popularity[2]. The lesion is a mucosal response to the heat of tobacco smoke rather than to the chemicals in the smoke[5]. It is completely reversible with in a few months of quitting the smoking habit[12].

Saunders *et al.,* 1958[9] described nicotina stomatitis as a papular leukoplakia in the palate that is caused by tobacco smoke striking the palate more directly than other regions. He described the red circular areas as the orifices of the mucous glands. Schwartz *et al*., 1965[1] also thought that this type of lesion was caused by tobacco. Van Wyk *et al.,* 1967[14] considered these lesions to be associated with a long history of smoking, especially pipe smoking.

In heavy smokers consuming more than 20 cigarettes a day, palatal painful erosions may occur in addition to nicotina stomatitis. The erosions are due to prolonged elevated temperatures in the oral cavity. Thickening of the epithelium and white lesions may also occur. The palate turns to normal color usually within 2-4 weeks after cessation of smoking.

James *et al* 1990[(3)] found palatal lesion resembling nicotina stomatitis in patients who did not have the habit of smoking. However, those patients frequently drank extremely hot beverages. They were instructed to reduce the temperature of beverages and after some time those lesions almost completely resolved. They suggested that heat was the primary cause of this lesion and also implicates heat as the major cause for nicotina stomatitis.

Sanjay saraf *et al* 1976[8] have diagnosed that nicotina stomatitis was prevalent in age group 40-50 years which coincides with our study.

In our study maximum number of cases showing positive result were beedi smokers(62%) which is not in agreement with the study conducted

by saietz *et al* 1998[7] were approximately 30% of pipe smokers had nicotina stomatitis compared with 7% of other smokers. In their study individual susceptibility is illustrated by the fact that even among pipe smokers with a relatively high consumption, 40% did not exhibit nicotina stomatitis.

## CONCLUSION

This study concluded that nicotina stomatitis seen in majority of smokers use filter cigarettes and they use 10-15 cigarettes per day and majority of people smoke for 5-10years. We are also concluded that apart from nicotina stomatitis and discolorisation of oral mucosa, smokers mainly suffer from cough and bad breath. Around 90% of the population have extrinsic stains over their teeth. Mass smoker population smoke due to tension and some smoke for pleasure.

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