



## RESEARCH ARTICLE

### TOBACCO INDUCED LESIONS-THE MOST DREADED YET THE MOST GLOBALLY AVOIDABLE ORAL DISEASES

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#### ABSTRACT

Tobacco induced lesions seem to be increasing with each passing day. The number of tobacco consumers is seen to be multiplying. Those addicted to tobacco, barely know that one day they might land into a serious health hazard. The current paper is a compilation of tobacco related ill effects on the general and systemic health and oral cavity.

## INTRODUCTION

Tobacco is produced from tobacco plant leaves by the method of curing. *N. tabacum* is used on commercial grounds. It contains active ingredients like alkaloids, nicotine and so on which act as stimulants and irritants. <sup>1</sup> There are several forms of tobacco that include, cigarettes, smokeless tobacco, hookah, cigars and so on. Tobacco and snuff are the most common forms of smokeless tobacco available. This type of smokeless tobacco is referred to as spit tobacco. <sup>2</sup> Recent research has shifted focus to cigarette tobacco smoking, where in the British Medical Journal was established a close link between smoking and lung cancer.

## DISCUSSION

One should be aware of the reality that, using any form of tobacco product is hazardous and the smokers get exposed to minimum 70 or more carcinogens, that destroys the entire human body. The sad part is very few know that by this habit the consumers are reducing their life by minimum a decade <sup>3</sup>.

Statistically it is estimated that the rate of deaths per year is around 480, 000. Carcinoma of pharynx, esophagus, stomach, lung, colorectal cancer are all associated with consumption of smokeless tobacco. Deadly lung diseases like lung diseases, chronic bronchitis, emphysema, COPD, asthma and so on are caused by tobacco consumption. Along with this some other problems like peripheral arterial disease, high BP, miscarriages in pregnant smokers, sudden infant death, premature births, erectile dysfunction are also in the forefront. <sup>4</sup> Smoking form of tobacco includes beedis, cigarettes, mainly with various devices like hooka, chutta, hukli, dhumti, chillum. Smokeless form includes betel quid which is betel leaf, areca nut, slaked lime, tobacco, catechu

Khaini which is tobacco flakes and slaked lime

Mawa which is areca nut, tobacco and slaked lime.

Snuff which is black brown powder obtained from tobacco

Gutkha which is areca nut and tobacco marketed in different flavours. <sup>5</sup>

Tobacco massively affects the oral cavity as it first comes in direct contact with the oral cavity.

To list, there is a diversity of lesions that occur due to tobacco consumption. Those lesions briefly include abrasions, tooth stains, smokers melanosis, black hairy tongue, periodontal problems, palatal eruptions, epithelial dysplasia.<sup>6</sup>

**Addiction cycle:** Use of nicotine for mood elevation, improved performance and mere pleasure. Use of nicotine for self medication and to get rid of withdrawal symptoms. Tolerance and physical dependence on nicotine. Abstinence of nicotine giving rise to withdrawal symptoms.<sup>7</sup> Oral lesions associated with tobacco Leukoplakia. Erythroplakia. OSCC of tongue, floor of the mouth, lip, gingiva. Verrucous carcinoma of buccal mucosa, gingiva, alveolar ridge. Periodontal problems like increased plaque and calculus deposits, pockets, gingival recession, bone loss  
Root caries etc.<sup>8</sup>

**Smoking and microbiology:** Smoking causes a four fold increase in the sub gingival ecology and periodontal pathogen population and colonization. Chief micro organisms that harbour are *P. gingivalis*, *P. intermedia*, *A. Actinomyces comitans*. Smoking facilitates easy adhesion of the pathogens to the epithelium.<sup>5</sup> There are a few studies that say there is a close association of smokers and dental caries. The sugar content gets more as a result making them more prone to caries.<sup>9</sup> Other studies indicated that reverse smoking was more prevalent in old females with a smokers palate turning to a carcinomatous lesion. In case of males lesions most common are leukoplakia and tobacco associated melanosis. Few lesions that are habit specific are OSMF, tobacco pouch keratosis, quid induced lichenoid reactions.

**Reality check:** Gone are those days when tobacco was used as a plant of medicinal values. It was used to cure maladies. It was available in various forms like ointments, pastes, mouth rinses, etc. Later the dreaded reality came into light that tobaccos have several harmful substances like tobacco specific nitrosoamines, polycyclic aromatic hydrocarbons, nicotine that are potent carcinogenic agents.<sup>10</sup>

**Myths and Illusions about tobacco:** Why do people get into this deadly habit at the first place ??? In one of the studies it was found that most of the tobacco consumers belonged to the class of drivers, daily wafers, agricultural labourers, farmers, fishermen, cleaners, plumbers etc. These consumers say that their work pattern demands a lot of stress and physical strain as a result of which they undertake this habit. Or they consume it for pleasure. In case of the female population it was noted that most women undertook reverse smoking to hide this habit from other family members or to prevent ashes falling on children or clothes. Also there are a few misbeliefs that this habit solves toothache, satisfies hunger or elevates mood, giving a soothing feeling. All such ideas gets the person closer to such habits.<sup>10</sup>

It was evident that occurrence of leukoplakia in habit associated cases is more than non habit associated cases. Chances of high grade dysplasia and risk of malignancy transformation is also more.<sup>11</sup> OSMF is also one such premalignant condition that is closely associated with chewing of tobacco and areca nut leading to significant morbidity. Excessive fibrosis leads to blanched mucosa, depapillation of tongue, and impairs tongue movements. Fibrosis also affects the uvula, soft palate, blocks eustachian tubes, impairs hearing and swallowing due to carcinogenicity and genotoxicity of areca nut and betel quid.<sup>11</sup>

## Conclusion

It can be solidly concluded that tobacco is doing no good to the human body. Its time we health professional come together and counsel the patients regarding the ill effects of tobacco. It needs to be emphasized that dependence on tobacco is nothing else but a tremendous addiction to nicotine. Lets all make a team effort by saving the addicts life and creating a bright and a better world free of tobacco addiction .... !

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