

Effects of tobacco use on oral health

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ABSTRACT

Use of tobacco is associated with a number of serious diseases, including cancer and cardiopulmonary conditions, as well as a number of other health issues. Tobacco usage results in a significant number of fatalities and serious human diseases worldwide each year. The harmful effects of tobacco use on dental health are just one of the many health issues connected to it. Smoking causes a wide range of oral health issues, from socially significant (periodontitis, tooth decay) to potentially fatal (precancerous alterations leading to oral cancer) (badbreath). Smoked tobacco, smokeless tobacco, chewing tobacco alone or in combination with areca nuts are all ways that tobacco is

used orally. All of these tobacco products have negative effects on dental health.

Stopping the use of tobacco products is the most important preventive action to avoid the oral health issues brought on by tobacco use. When a smoker stops using tobacco, their risk of acquiring mouth cancer quickly decreases. An ex-risk smoker's risk of oral cancer is roughly equal to that of a person who has never smoked after ten years of abstinence. It's not simple to quit using tobacco products. Thankfully, there are many therapies available to help people stop using cigarettes. Remember that quitting tobacco provides immediate health benefits, including a longer life expectancy and a lower risk of developing tobacco-related diseases and disorders, even if it will be challenging.

Key Words: Smoking; Oral cancer; Tobacco; Oral leukoplakia

INTRODUCTION

The leading global cause of preventable death is tobacco usage. Smoking manufactured cigarettes is the most common way tobacco is consumed, while there are many other ways. In the past ten years, the US has seen an increase in cigar consumption, notably among adolescents of both sexes. Cigars can deliver nicotine through smoke and direct oral contact with the tobacco wrapper and have a higher overall nicotine load than cigarettes. Cheroots are little cigars with a strong tobacco flavour. One-third of the tobacco produced in India for smoking is used in the popular South Asian practice of bidi smoking. In North America, Bidis and Kreteks are becoming more and more popular among young people, and more than 15% of adolescent smokers use these tobacco products. One of the oldest smoking practises is pipe smoking, which sailors from America introduced to Europe. Special passageways through which smoke must pass in water pipes are included, ostensibly to lessen the smoke's negative effects. Indians use water pipes called hookah. In some parts of India, South America, and the Philippines, reverse smoking is the practice of holding the lit end of cigarettes or cigars inside the mouth. Older women living in rural areas engage in the behaviour frequently.

SMOKED TOBACCO

Smoke from cigarettes contains a lot of poison. Side-stream smoke

from the burning cigarette tip and main-stream smoke from the filter or mouth end make up tobacco smoke. The dozens of distinct compounds included in tobacco smoke are emitted as gases and particles. The particulate phase contains benzene, benzo(a)pyrene, nicotine, and "tar" (which is made up of several compounds). Carbon monoxide, ammonia, dimethylnitrosamine, formaldehyde, hydrogen cyanide, and acrolein are all present in the gas phase. Some of these are highly irritating, and 60 of them, including dimethylnitrosamine and benzo(a)pyrene, have been proven to cause cancer.

The tar yield of various cigarette brands ranges from 0.5 mg to 26 mg (averaging 12.5 mg), with the most popular brands having a tar content of 15 mg-17 mg. Since 1998, cigarettes sold in the European Union (EU) must contain less than 12 milligrams of tar. The most popular brands produce 1.0 mg of nicotine, with nicotine outputs ranging from 0.05 mg to 1.7 mg. Over 95% of cigarettes produced and consumed in wealthy nations have a filter tip. About 10% of people, especially from lower socioeconomic categories, smoke tobacco in their own hand-rolled cigarettes.

SMOKELESS (CHEWING) TOBACCO

Smokeless tobacco comes in two major varieties: snuff and chewing tobacco. The usage of smokeless tobacco by Asians combined with

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betel or areca nut has received the greatest attention. More than 90% of Indians mix tobacco into the betel nut mixture. Gutka refers to commercially produced betel quid items that mostly consist of areca nut and tobacco flakes. Other ST products that are significantly mutagenic include Toombak, which is used in Sudan, Shamma, which is used in Saudi Arabia's Jizan province, powdered tobacco and alkali mixtures, such as Nass/Naswar, which is used in Pakistan, northern and central Asia, and Khaini, which is a mixture of ST and lime and is used in Nepal and the Indian state of Bihar, as well as boiled/sweetened ST known as Zarda, which is [1]. A higher risk of oral cancer is linked to all of these tobacco use behaviours.

Environmental tobacco smoke

Humans are susceptible to cancer from Environmental Tobacco Smoke (ETS). Meta-analyses have revealed a substantial link between lung cancer and exposure to a spouse's cigarette smoking as well as between lung cancer and exposure at work. Other cancer forms may provide unknown risks. The available data currently does not support the risk of any cancer in children exposed to parental smoking.

Epidemiology

By 2020, it is predicted that tobacco, which currently kills 4.9 million people worldwide each year, would have claimed 10 million lives. What's more upsetting is that half of them will pass away in middle age. A WHO data set provides a global estimate of the prevalence of smoking in each country for reference [2]. These are based on the smoking habits of adults and young people gathered from cross-sectional population-based surveys at a particular time. Both the largest producer and user of tobacco in the world is China. In 1996, a nationwide study of people (aged 15 and over) indicated that 63% of men smoked.

There has been a reduction in prevalence in the USA and the majority of western European countries since 1970, according to national surveys of people 18 and older. Men quit more frequently than women, and women's decrease rates are lower than men's quit indices. There are currently twice as many ex-smokers as current smokers in the UK and the USA. In general, those with the highest educational levels have the lowest rate of smoking in most population categories. Adult Black smokers in most nations are comparable to White smokers in terms of race. In the EU, Denmark has the highest rates of smoking.

General effects

Smoking-related illnesses include bronchitis, chronic obstructive pulmonary disease, emphysema, asthma, lung, bronchus, lip, mouth, and throat cancers, ischemic heart disease, stroke, and hypertension. Male lung cancer rates have drastically declined in the past ten years due to a significant drop in smoking in nations like the UK. After the year 2000, the number of fatalities annually related to smoking among women should surpass that among males.

Effects of tobacco on teeth and oral health

The detrimental consequences of tobacco use on oral health are now widely acknowledged, including a higher prevalence and severity of periodontal diseases among smokers and the link between tobacco

use and oral cancer and candidiasis [1]. Recent studies have examined the available scientific information regarding the burden of oral diseases linked to tobacco smoking and have emphasised the need of the dentistry profession participating in tobacco intervention [2].

Smoking stains teeth, and others claim that tobacco use may actually exacerbate tooth decay because it affects the pH and buffering capacity of saliva. Smoking is likely to result in halitosis and may have an impact on taste and smell. Smokers may exhibit generalised oral mucosal melanosis, which frequently requires studies to rule out other systemic diseases. Smokers had slower wound healing, probably as a result of localised vasoconstriction and dysfunctional neutrophils. There is solid proof that smoking contributes significantly to the development of periodontal disease [3]. Smokers are more likely to develop periodontitis, and their illness is more severe and causes deeper pockets than non-smokers due to more alveolar bone loss. Heavy smoking has been proven to be related to a condition called Acute Necrotising Ulcerative Gingivitis (ANUG). When treating smokers with periodontal therapy, attachment loss is difficult to stop. The failure rate of dental implants is higher in smokers than in non-smokers, possibly for comparable reasons.

Oral cancer

Tobacco usage is linked to more than 80% of cases of mouth cancer [4]. Oral squamous cell carcinoma can manifest itself in a number of ways, including white or red patches, ulcers that don't heal, or exophytic growths. The majority of early lesions have no symptoms. Pathognomonic indications of oral cancer are persistent ulceration with rolling margins and fixation to underlying tissues. In its latter stages, the disease can induce movable teeth, tooth loss, pathological mandibular fractures, and spread to nearby structures, most notably implicating local lymph nodes. These phases could be accompanied by discomfort, numbness, or paraesthesia. Other places include descriptions of the clinical characteristics of mouth cancer. Currently, the diagnosis of oral cancer relies on a pathological analysis of a biopsy and the application of imaging tools to determine the disease's extent. Additionally, a variety of auxiliary technologies are available that can make it easier to diagnose oral cancer in its early stages [5].

Oral leukoplakia

The most prevalent potentially malignant lesion is oral leukoplakia, which is described as a primarily white lesion of the oral mucosa that cannot be classified as any other distinct lesion [6]. Leukoplakia can show as red or nodular lesions with a splotchy appearance or as completely white homogenous lesions. Although idiopathic types of leukoplakia are recognized, it is common to correlate this disease with cigarette usage. The location of the oral cavity damaged by leukoplakia is sometimes believed to be related to the type of tobacco habit practiced; lateral tongue and floor of the mouth in cigarette smokers, palate in pipe smokers and reverse smokers, commissures in bidi smokers, buccal groves in tobacco chewers where they park the quid, and lower or upper labial mucosa in snuff dippers.

PREVENTION

The reduction of tobacco usage is a crucial component of public health. Young people should be the appropriate target of preventive measures because tobacco use and experimentation begin in early life. Pediatric dentists, orthodontists, school dentists, and family doctors

can take action to start giving young children counsel not to start smoking. It is known that laws against tobacco advertising, taxes, and public smoking bans have an impact on cigarette sales. Primary prevention, or encouraging individuals to avoid using tobacco in the first place and supporting existing smokers in giving up, is a successful strategy for lowering oral cancer-related morbidity and mortality.

CONCLUSION

There is substantial evidence that tobacco usage has a significant impact on oral health. The negative consequences of tobacco on oral health, in whole or in part, are well established. However, tobacco use is a modifiable risk factor for oral diseases, and a clear professional interest in tobacco intervention can significantly impact an individual's health or the course of a particular disease. In the healthcare system, dentists have perhaps the best access to "healthy" tobacco users, and even in the absence of tobacco-related oral disorders, they may quickly identify these patients. As a result, dentists should pursue more formal training in tobacco quitting counseling, which should be an integral part of their duties, just like controlling plaque and offering dietary recommendations.

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