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Consumption of tobacco and its impact on oral health: A review

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Abstract:

Introduction: There is clinical evidence that the use of tobacco- smokeless and smoked- has an adverse effect on oral health.Numerous studies have shown that tobacco use would lead to an increased incidence and severity of periodontal diseases and a higher rate of tooth loss.

Materials and Methods:Saliva is the first biological fluid that is subjected to cigarette smoke, which contains numerous toxic substances. These substances are responsible for structural and functional changes in saliva, that may lead to an altered Salivary Flow Rate(SFR).

Conclusion:Tobacco use has been known to be closely linked with periodontal diseases, dental implant failure, oral cancers, and the development of precancerous lesions.

Advising and counselling the patients to quit tobacco use is our responsibility as dental healthcare professionals, and the dentists can play a very crucial role in Tobacco Cessation Counselling

Keywords: Tobacco, Periodontal, Halitosis, Gingivitis

Introduction

There is clinical evidence that the use of tobacco- smokeless and smoked- has an adverse effect on oral health.[2] Numerous studies have shown that tobacco use would lead to an increased incidence and severity of periodontal diseases and a higher rate of tooth loss.[1]
The adverse effects of cigarette smoking and other forms of tobacco are numerous and tobacco use has been associated with gingival, oral mucosa and dental alterations.[3]

Materials and Methods:

The functions of saliva are the following:

1. Protecting the oralmucosa
2. Teeth remineralization
3. Digestion
4. Tastesensation
5. Phbalance
6. Phonation.

Saliva is the first biological fluid that is subjected to cigarette smoke, which contains numerous toxic substances. These substances are responsible for structural and functional changes in saliva, that may lead to an altered Salivary Flow Rate(SFR).

Intense smokeless tobacco use has been shown to cause degenerative changes in more than 40% of

the minor salivary glands located in the site of chronic tobacco placement.

Tobacco smoking is linked with many serious illnesses, ranging from cardiopulmonary diseases, cancer, as well as with many other health problems. It is also linked to a detrimental impact on oral health, such as increasing risk of periodontal (gum) diseases. Peri-implantitis and implant failure is also seen to be higher in smokers and tobacco users than patients who don't use any form of tobacco.

Tobacco is consumed through the mouth in a variety of different forms, varied from smoking to smokeless tobacco chewing on itself or combined with betel nut. These forms of tobacco may induce a variety of oral manifestations of diseases, oral precancerous lesions as well as oral cancer. In addition to this, tobacco consumption is associated with halitosis, staining of teeth and composite restorations, decreased ability to taste and smell, and nicotinic stomatitis and keratosis. While these effects are reversible after cessation of the

habit, even the intermittent presence of these lesions and conditions can be socially or mentally crippling to the patient.

Periodontal diseases caused by tobacco may lead to recession of the gingiva and exposure of the root surfaces of the teeth, rendering them susceptible to root caries. Furthermore, studies have shown that the severity of periodontal disease increases with frequency as well as duration of smoking.

Acute necrotising gingivitis is also strongly correlated with tobacco use. The gingival bleeding in smokers is also 'less severe' than in non-smokers. This is attributed to the vasoconstrictive effect of the nicotine.

Discussion:

Smokeless tobacco users have incidences of gingivitis and gingival bleeding that is similar to the incidence among non-users. Nevertheless, use ofsmokeless form of tobacco is known to produce a painless loss of gingival tissue as well as alveolar bone destruction in the area of chronic tobacco contact. This is said to be a result of collagen breakdown due to increased release ofcollagenase. Nicotine also inhibits the growth and proliferation of gingival fibroblasts, and the production of fibronectin and collagen, which are essential components for repair of the gingival tissues.

Conclusion:

Tobacco use has been known to be closely linked with periodontal diseases, dental implant failure, oral cancers, and the development of precancerous lesions.
Advising and counselling the patients to quit tobacco use is our responsibility as dental healthcare professionals, and the dentists can play a very crucial role in Tobacco Cessation Counselling.

Only with close collaboration of both dentists and physicians with smoking cessation programmes can the goals of leading patients away from tobacco consumption be successful.

Ethical clearance – Not required since it is a review article

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Conflict of interest – nil

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