



TOBACCO POUCH KERATOSIS: SERIES OF THREE CASE REPORTS

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Article Received on 02/09/2018

Article Revised on 24/09/2018

Article Accepted on 15/10/2018

ABSTRACT

Worldwide, various forms of tobacco have been in use which gives a sense of gratification to the users. In India, smokeless form of tobacco is gaining popularity and is being used orally or nasally. Orally, tobacco is placed in the buccal and labial vestibules for a long term leading to subtle mucosal changes, precancerous lesions and conditions, oral cancer as well as nicotine dependence. This paper presents a case series with typical features of tobacco pouch keratosis and discusses the management, and guidelines for dentists in educating and counselling tobacco users.

KEYWORDS: Tobacco Pouch Keratosis, Smokeless form Tobacco, Counseling, Snuff Dipper Lesion.

INTRODUCTION

Tobacco use in any form is deadly and lethal and exposure to tobacco smoke causes death, disease and disability. Tobacco is the most common and a leading preventable cause of death. According to the World Health Organization (WHO) estimates, globally, there were 100 million premature deaths due to tobacco in the 20th century, and this number is expected to rise to 1 billion in the 21st century killing nearly six million people worldwide each year.^[1] Tobacco was introduced in India by the Portuguese nearly 400 years ago. Due to the diversities in culture it rapidly became a part of socio-cultural milieu in various communities India is the second largest producer of tobacco in the world after China^[2] India has a large number of habitual tobacco users who use a variety of smoking and smokeless forms which cause an array of changes in the oral cavity leading to a wide spectrum of oral mucosal lesions such as mucosal pigmentation, tobacco induced keratosis, leukoplakia, oral submucous fibrosis, oral cancer depending on the type, duration and frequency of use. The mucosal changes most likely results from the carcinogens and toxins found naturally in processed or burned tobacco leaves, but they may also arise from the drying effects on oral mucosa, increased intraoral temperature and intraoral pH changes. The prevalence of tobacco use among Indian adults is 35%.^[3] Smokeless tobacco is used in various forms like chewing plain tobacco, paan quid which is a mixture of areca nut, slaked

lime, flavoring agent, betel leaf and tobacco, commercial preparations such as gutka, zarda, khaini, mishri, kiwam, snuff mawa etc which are products containing pieces of areca nut coated with powdered tobacco, sweetening and flavoring ingredients in addition to other spices such as clove, saffron, cardamom, etc.^[4] Tobacco consumption also remains the most important avoidable risk factor for oral cancer. Tobacco related cancers account for nearly 50% of all cancers in men and 25% in women.^[5] This paper presents three case reports on tobacco pouch keratosis which is one of the effect of smokeless tobacco usage on the oral mucosa and its management.

CASE 1: A 25 year old male patient reported to the department of Oral medicine and Radiology with the chief complaint of decayed teeth and associated food lodgement. His past medical history was non contributory and his habit history revealed the use of tobacco since 3 years in the form of mawa quid which he placed in his lower left vestibule for a span of 3-4 hours and then spit it out. On an average, he chews 2-3 quids a day. On intraoral examination, a grayish-white plaque was evident on his left buccal mucosa extending from distal surface of left third molar to the first molar [Figure 1]. The borders were diffuse and the lesion had a wrinkled appearance. On palpation, the lesion was non tender, non scrapable and had a thickened and a rough surface texture. His teeth showed tobacco stains and his overall oral hygiene was poor with halitosis. The patient

was educated and counseled about the ill effects of using smokeless tobacco, and was advised to quit the habit and a follow up was scheduled after 1 month.



Figure. 1: Wrinkled appearance on left buccal mucosa.

CASE 2: A 40 year old male patient reported to the department of oral medicine and radiology with the chief complaint of mobility of teeth. His past medical history was not significant, and his habit history revealed the use of tobacco since 15 years in the form of betel paan quid and he placed the quid in his lower labial vestibule for a span of 1-2 hours and then spits it out. On an average, he chews 5–6 quids a day. On intraoral examination, there was a painless white-grayish mucosal patch with surface roughness, folding and corrugations in the lower labial vestibule extending from first premolar to lateral incisor region [Figure 2]. The borders were diffuse and gradually merged with the normal mucosa. The surface of the lesion had a wrinkled appearance and showed yellowish stains of deposits of the ingredients used in the paan. On palpation, the lesion was non tender, non scrapable and had a rough thickened surface texture. His teeth showed tobacco stains and his overall oral hygiene was poor leading to generalized periodontitis. There were no palpable submandibular or cervical lymph nodes. The patient was educated and counseled about the ill-effects of using smokeless tobacco, and was advised to quit the habit and a follow-up was scheduled after 3 weeks.



Figure. 2: A white plaque like lesion having a wrinkled appearance.

CASE 3: A 50 year old female patient reported to the department of Oral Medicine and Radiology with the chief complaint of mobility of teeth. Her past medical history was non contributory. Her habit history revealed the use of tobacco since 23 years in combination with slaked lime. She mixes all the ingredients in a quid form and keeps in her left lower buccal vestibule for a span of 4–5 h and then spits out. On an average, she chews 4-5 quids a day. On intraoral examination, a grayish-white lesion was evident in the left lower buccal vestibule extending from the distal surface of the second molar to canine region approximately [Figure 3]. The borders were diffuse and gradually merged with the normal mucosa. The lesion had a distinct pouch with a wrinkled appearance. On palpation, the lesion was non tender and non scrapable. The patient was counseled and was advised to quit the habit and was recalled for follow-up after 1 month.



Figure. 3: Distinct pouch with wrinkled appearance.

DISCUSSION

Tobacco is the single greatest cause of preventable death world widely. Tobacco use leads most commonly to diseases involving the respiratory and cardiovascular system, smoking is the major risk factor for heart attacks, strokes, chronic obstructive pulmonary diseases, lung cancer, cancers of the larynx and mouth, all developed due to the exposure time and the level of tobacco dosage.^[6] A wide use of smokeless tobacco is seen in South and South-East Asia, wherein tobacco is usually chewed together with betel nut, slaked lime, clove and other flavouring agents forming a quid.^[7] Smokeless tobacco contains many carcinogens especially the tobacco-specific nitrosamines, polycyclic aromatic hydrocarbons and aldehydes.^[8] Use of smokeless tobacco has also been associated with the development of gingivitis, gingival recession and attachment loss, halitosis, reduction of taste, abrasion of teeth, mucosal changes like tobacco pouch keratosis, leukoplakia, and OSMF in addition to the risk of oral cancer.^[9] Tobacco pouch keratosis is a well-recognized white mucosal lesion in the area of tobacco contact usually seen in smokeless tobacco chewers.^[10] Many synonyms such as snuff dipper's keratosis, snuff pouch and smokeless tobacco keratosis have been proposed for this condition.

The lower anterior vestibule is the most common site for tobacco pouch followed by the posterior vestibule. Management of tobacco pouch keratosis includes complete cessation of tobacco chewing habit and follow-up to re-assess the lesion. The Tobacco and Cancer Program of the National Cancer Institute recommends that all health-care professionals follow the 5As guidelines (Table 1) to aid in successful intervention of educating and counselling tobacco users.^[11]

Table. 1: 5A's of Tobacco Cessation.

5A's	Method of intervention
Ask about tobacco use	Systematically Identify and document tobacco use status for every patient at every visit
Advise to quit.	In a clear, strong, and personalized manner, urge every tobacco user to quit.
Assess willingness to make a quit attempt.	Is the tobacco user willing to make a quit attempt at this time?
Assist in quit attempt.	Aid the patient in quitting by providing counseling and medication
Arrange follow up.	For the patient willing to make a quit attempt, arrange for follow up contacts, beginning within the first week after the quit date For patients unwilling to make a quit attempt at the time, address tobacco dependence and willingness to quit at next clinic visit.

If the patient is unwilling to quit the habit, switching the site of tobacco quid placement can provide a temporary relief. Oral mucosa resumes to normalcy within 2 to 6 weeks in around 98% of patients after stopping the habit. Nicotine replacement therapy such as nicotine gum, patches and lozenges can be given to patients which acts as a substitute.^[12] A biopsy is mandatory if there is any evidence of ulceration or erythema to rule out malignant changes.

CONCLUSION

Tobacco use in smokeless and smoke form continues to be practiced through several centuries. In the recent years there has been an alarming rise in the use of smokeless tobacco, about twice as high as smoking in India. Smokeless tobacco use is associated with premalignant and malignant lesions which increases the mortality and morbidity if not recognized and managed early. Dentists play a crucial role in early identification of tobacco related conditions and also play a major part in patient education, counseling and creating awareness about the harmful effects of tobacco.

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