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TOBACCO CESSATION COUNSELING IS AN EFFECTIVE METHOD IN THE MANAGEMENT OF NICOTINA STOMATITIS PALATINI: A CLINICAL CASE REPORT AND REVIEW

Dentistry

Dr. Shazan Mohammed Khan Bsc, BDS, MDHM (Osm), MA (Clin.Psych), M.Phil, Oral & Dental Surgeon, Clinical Counseling Psychologist, Ex.Asst. Professor Owaisi Hospital (DSHM), Tobacco cessation counsellor, SMK Dental Hospital, Hyderabad, Telangana, India.

Dr. Tahera Tarek Syed* BDS, MDS, Oral physician, Dental & Maxillofacial radiologist, Tobacco cessation counsellor, SMK Dental Hospital, Hyderabad, Telangana, India. *Corresponding Author

ABSTRACT

Nicotina stomatitis palatini is a specific lesion which develops on the palatal mucosa of heavy cigarettes, cigars, bidi and pipe-smoking persons. The condition is also known as smoker's palate, Smoker's keratosis, and smoker's hyperplasia of the hard palate. Proper tobacco cessation counselling methods are very effective in the management of tobacco-related oral lesions. As the oral cavity is the way to chew and swallow, the patients frequently visit the dental office for discomfort for the same, here is the scope of counselling the patient for tobacco cessation. This is the opportunity for a dental professional with a habit counsellor as an added advantage to educate and counsel patients in tobacco cessation. Here, we are presenting a case of management of nicotina stomatitis palatini with the help of habit counselling method & role of dental professionals in tobacco cessation.

KEYWORDS

Smoking, Tobacco, Habit Counelling, nicotina stomatitis palatini.

INTRODUCTION

Nicotina stomatitis palatini or Smoker's palate, is an asymptomatic lesion associated with heavy cigarettes, pipe, and cigar smoking usually appearing as grayish white changes in the hard palate, often combined with multiple red dots located centrally in small elevated papule or a nodule.[1]

Nowadays tobacco smoking is one of the most common causes of mortality and morbidity in developed and developing countries. [1]This condition most commonly occurs in males above 45 years with a habit of heavy cigarettes, bidi, pipe, and cigar smoking.[1]

The grades of a smoker's palate progress with a longer duration of smoking habit which may turn into a malignant condition. Therefore, early detection, screening, and proper habit counseling are very important to stop the progression of initial mucosal changes to potentially malignant disorders.[2]

Cigarettes contain over 4000 constituents of chemicals and free radicals such as nicotine, ammonia, acrolein, phenols, acetaldehyde, benzopyrene, nitric oxides, carbon monoxide, polonium, radium, and thorium that can cause cellular damage. [2]

Case Report

A male aged 53 years old came to a private dental clinic with a complaint of pain and a decayed tooth in relation with the left maxillary first molar and red & white patches on his hard palate with a burning sensation for the same. The patient was apparently asymptomatic one month back, later he experienced pain in the left maxillary first molar region and a burning sensation on the hard palate when consuming hot & spicy food since 15 days.

Dental history: Past dental history revealed removal of his left maxillary first and second premolar (24, 25), 4 years back.

Medical history: The patient has a known case of diabetes mellitus, since 10 years and he was taking medication for the same.

Habit history: The Patient has a habit of cigarette smoking since 30 years, 8 to 10 cigarettes per day.

Clinical Findings:

General examination revealed patient is moderately built with a steady gait and normal vital signs. There were no signs of pallor in the conjunctiva, cyanosis and icterus in the sclera were noted. Skin and nails show no sign of koilonychia, beading, clubbing, cyanosis, or pallor.

Intraoral examination revealed diffuse red and white lesion seen on the hard palate which extends from the incisive papilla to fovea palatinae, involving palatal rugae, median palatine raphe measuring about 50 x 60 mm in diameter. (figure:1{a & b}) Along with a well-defined white patch (figure:1b) seen on the left side of the mid-palatine raphe, i.r.w. edentulous region of teeth 24, 25 which measure approximately 30mm in diameter.

The surface of the lesion appeared red dots, with an erythematous base and irregular diffuse borders noted. On palpation, the lesion has a rough thickened surface, non-tender, with no bleeding on provocation was evident.

On correlating the chief complaint, history of habit, clinical examination, and Considering the Greenburg et al grading criteria, a provisional diagnosis of Grade II smoker's palate was given.

Management:

For toothache, we started antibiotics, analgesics and advised root canal treatment, for hard palate lesion we recommended topical medications which includes anesthetics, topical steroids, and topical antifungal agents with oral antioxidants.

Along with the above pharmacotherapy, counselling method and techniques like the 5 A's (Table:1) strategies and cognitive behavioral therapy was used for the cessation of the habit.

Treatment outcomes:

Within 1 week span, the patient gets relieved from toothache, burning sensation, and redness of the hard palate (figure: 2 a & b).

Along with pharmacotherapy, tobacco cessation counselling, and cognitive behavioral therapy play major roles in effective management of Nicotina stomatitis palatini.

DISCUSSION

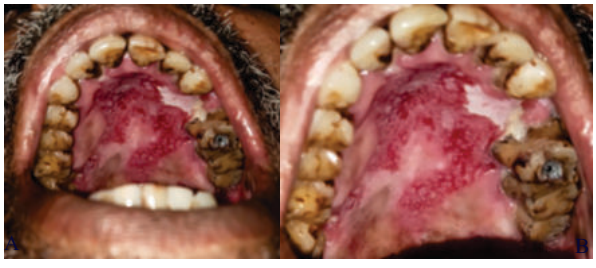

Figure: 1 (a & b) Clinical Pictures of the palatal lesion

Nicotina stomatitis palatini/ smoker's palate is a specific lesion that develops on the palatal mucosa of heavy cigarette, bidi, cigar, or pipe smokers. In this condition, palatal mucosa shows diffuse

hyperkeratosis, which appears grayish white and thickened surface. [3]

Hyperkeratosis blocks palatal minor salivary glands duct orifices, which causes retention of the secretions leading to multiple small nodular swellings on the palate. Retention of ductal secretions causes inflamed ductal orifices and they appear as red umbilicated dots in the center of the nodular swellings. This phenomenon is caused by a response of the palatal mucosa to chronic heat. In severe cases, the mucosa may show fissuring and develop a dried lake appearance. [3]

Patients diagnosed with smoker's keratosis were classified by Greenburg et. al. into three grades. [1]
1. Grade I: Mild- Considering of red, dot-like opening on the blanched area.
2. Grade II: Moderate- characterized by well-defined elevation with central umbilication.
3. Grade III: Severe- Marked by papules of 5 mm or more with umbilication of 2-3 mm.

The definitive management of nicotina stomatitis palatini is smoking habit cessation. If the smoker's keratosis is caused by heat, the lesion is usually completely reversible within a few weeks.[1] Smoking cessation counseling plays a major role in treating such lesions. In our case report, mucosal lesion in the palate caused by heat (smoking), is diminished within one week after cessation of habit.

This paper is a counseling case report on a male patient of age 53 years with a habit of eight to ten cigarette smoking per day since 30 years. In this case we used therapeutic medications along with counselling methods like 5 A's (Table-1) and 5 R's (Table-2) strategies and cognitive behavioral therapy for smoking cessation.

Role Of Dental Professionals In Tobacco Cessation:
Dental professionals are in a unique position to educate and motivate patients regarding the hazards of tobacco to their oral and systemic health and provide intervention programs as a part of routine patient follow-up care.

Dentists play an important role in the detection of harmful effects of tobacco like premalignant lesions and conditions in the early stages which can be clinically apparent in the oral cavity.

Brothwell DJ conducted a study that revealed that oral health professionals are effective at increasing the number of patients who successfully quit smoking. In 1996, the World Dental Federation (FDI) ingrained a section on world dentistry against tobacco and adopted the FDI position statement on tobacco.[4]

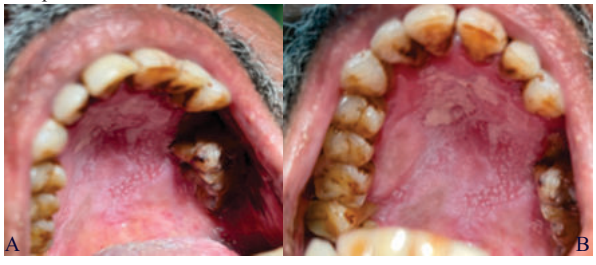

Figure: 2 Followup Pictures of the palatal lesion (After 1 week)

Tobacco Dependence:
The International Classification of Diseases (ICD-10) has conceded that tobacco dependence is a disease. Tobacco dependence is defined as, a "cluster of behavioral, cognitive and psychological phenomena that develop after repeated tobacco use and that typically include a strong desire to use tobacco, difficulties in controlling its use, persistence in tobacco use despite harmful consequences, a higher priority given to tobacco use than other activities and obligations, increased tolerance and sometimes a physical withdrawal state".[4]

Health consequences:
Tobacco use can seriously affect general, as well as oral health. Oral mucosa is the first to be exposed to tobacco products which may cause tooth stains, abrasions, necrotizing ulcerative gingivitis (ANUG), leukoplakia, erythroplakia, smoker's keratosis, palatal erosions, and oral carcinomas. [4]

Smoked or smokeless tobacco use has been regarded as a potential risk factor for chronic conditions like cancer, and cardiovascular and pulmonary diseases, with serious deleterious effects. Doll et. al conducted a study, which revealed that cancer of the lung, chronic obstructive lung disease, and cardiovascular diseases are all strongly associated with cigarette smoking.[4]

Smoking during pregnancy increases the chances of premature birth, low birth weight babies, miscarriage, and sudden infant death syndrome (SIDS). It also increases six times greater chance of cleft palate formation. [4]

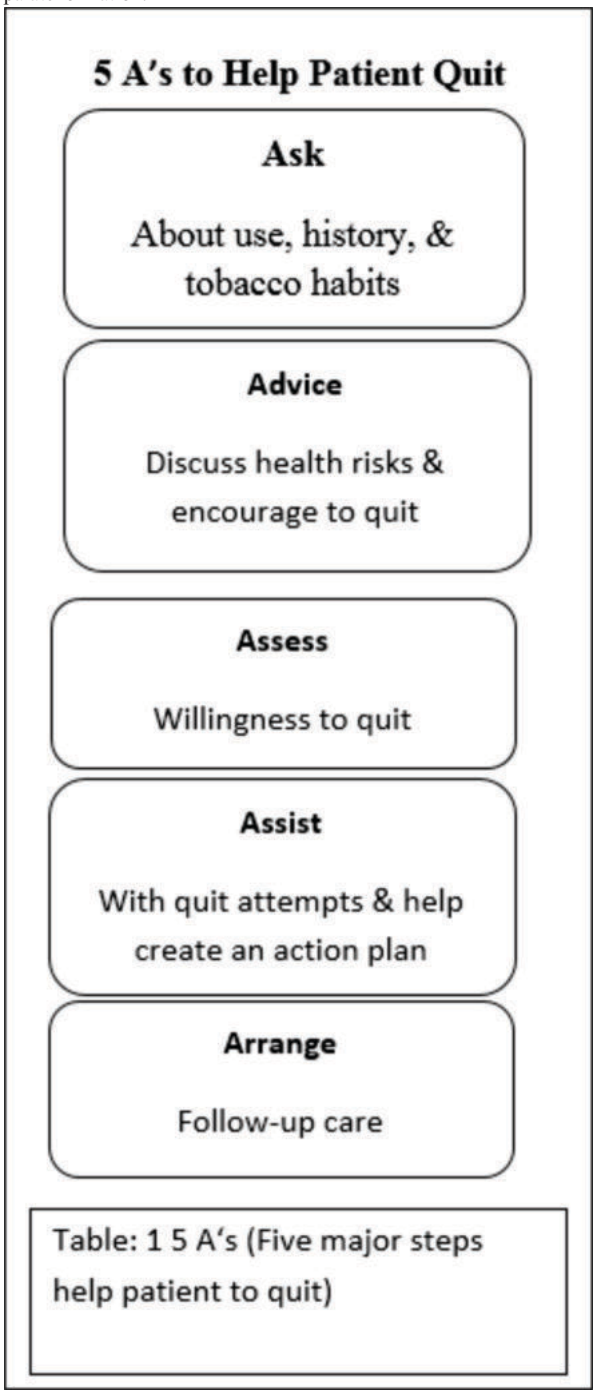

Table: 1 5 A's (Five major steps help patient to quit)

Source: (Tobacco Cessation In Dental Settings, Reference Manual For Dental Professionals, National Resource Centre For Oral Health And Tobacco Cessation Maulana Azad Institutes Of Dental Sciences, New Delhi.)

Tobacco Cessation Methods:
Smoked and smokeless tobacco use is a major preventable cause of premature death and disease, currently leading to over five million deaths each year worldwide. It can seriously affect general, as well as

oral health.[4]

Tobacco cessation is obligatory to reduce morbidity and mortality related to tobacco use. Tobacco cessation counselling methods involve behavioural interventions, 5 A's (Table:1) and 5 R's(Table:2) Strategies, quitlines and pharmacotherapy. [4]

Tobacco Cessation Methods Can Be Broadly Classified Into:

1. Behavioural Interventions:

Behavioural interventions considered to be an effective method in smoking cessation include in-person counselling, telephone counselling, and self-help materials. According to public health service guidelines, habitual persons should undergo at least 4 in-person counselling sessions. Effective telephone counselling interventions should provide at least 3 telephone calls and can be allocated by trained professional habit counsellors.[5]

5 R's to Increase Motivation to Quit

Table: 2 5 R's (Five major steps- Increase motivation to quit)

Source: (Tobacco Cessation In Dental Settings, Reference Manual For Dental Professionals, National Resource Centre For Oral Health And Tobacco Cessation Maulana Azad Institutes Of Dental Sciences, New Delhi.)

2. Cognitive Behavioural Therapy:

One of the counselling methods is cognitive behavioural therapy (CBT) is also helpful in smoking habit cessation. Reframing of negative thoughts can be explored by CBT therapy methods, this may make it easier to cope with nicotine and other cravings unpleasant emotions, and feelings related to withdrawal symptoms.

According to Kalman et. al. the cognitive behavioural approach is used in the management of smoking by allowing changes in the lifestyles of the habitual person, as well as modifications of dysfunctional beliefs and behaviours that relate to the act of smoking. CBT is an active and pragmatic approach where the alcoholic individual learns to detect smoking relapse circumstances and develops strategies to cope and prevent repeat happenings. [6]

3. Pharmacotherapy

Pharmacotherapy interventions accepted by the FDA for the treatment of tobacco dependence in adults include bupropion SR, varenicline, and nicotine replacement therapy (NRT). [5]

Bupropion SR acts as an effective drug in smoking cessation aid. Its dopaminergic activity significantly reduces withdrawal symptoms and nicotine craving and thus can be used for smoking cessation.[4]

Drug Varenicline is a selective alpha4- beta 2 nicotinic receptor partial agonist. [5] It works by diminishing the strength of the smoker's urge to smoke and by relieving cravings and withdrawal symptoms. [4]

4. Nicotine Replacement Therapy

Nicotine Replacement Therapy alleviates nicotine withdrawal symptoms and reduces smoke's desire to smoke. [4]

A different variety of nicotine replacement products are available in the markets, like nicotine gum, nicotine patches, nasal sprays, nasal inhalers, nicotine sublingual tablets lozenges, and nicotine vaccines. These products have a shorter duration of action, in which blood nicotine levels reach a peak within 20 minutes. [4]

The aim of nicotine replacement is to relieve cravings and reduce nicotine withdrawal symptoms.

There is evidence that combining a slow nicotine-releasing product (e.g. nicotine patch) with a rapid delivery form of Nicotine Replacement Therapy (e.g. chewing gums, lozenges, nasal spray, and inhalers) is more effective than using a single type. [5]

5. Combination Behavioral And Pharmacotherapy:

Behavioral interventions combined with pharmacotherapy increased cessation rates from 8% to 14% when compared with minimal behavioral interventions such as brief advice on quitting.

Combination intervention therapy usually includes behavioral therapy provided by trained professional habit counsellors combined with NRT. [5]

CONCLUSION

The dental clinic/ office is a place where patients visit for any kind of discomfort in the oral cavity regarding chewing, swallowing, and not being able to eat spicy food in some precancerous conditions. In this paper, a counseling case report is documented with nicotina stomatitis palatini in which heat from smoking induces changes in the palatal mucosa. The grades of this lesion progress with a longer duration of smoking habit which may turn into a malignant condition. Therefore, early detection, screening, and proper habit counseling are very effective in stopping the progression of initial mucosal changes to potentially malignant disorders. Here the role of dental professionals with psychology as an important qualification acts as an added advantage in counselling the patients and attenders which may lead to cessation of habit.

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