Abate the Cause of Cancer - A Dentist Intervention in Tobacco Deaddiction (Indian Scenario)

Dr Sujatha D¹, Dr Asha V², Dr Thanuja Raju Jacob³

Department of Oral Medicine and Radiology, The Oxford Dental College and Hospital, Bangalore 560068, India

Abstract: India is known to have the highest rates of oral cancer in the world. By 2020 it is predicted that the tobacco deaths in India may exceed 1.5 million per year by the World Health Organization. Precancerous conditions and oral cancers are always linked to the use of tobacco. Though the deleterious effects of tobacco are well known, it is a tedious task for the clinician to help the patient in deaddiction. The purpose of this article is to highlight the deaddiction techniques practiced by the oral physician in the clinical setting and how to overcome the barriers in a step by step process.

Keywords: Tobacco Deaddiction, Oral Cancer, Dentist Intervention

1. Introduction

The use of tobacco is one among the leading cause of preventable deaths all over the world. Tobacco is also one of the major causes of mortality and morbidity in India and thus India has one of the highest ratings in oral cancer. WHO stated that deaths due to tobacco in India may exceed more than 1.2 million annually by the end of 2020.¹

According to the Global Adult Tobacco Survey (GATS) conducted in India in the year 2010 the data revealed that the overall tobacco use is found to be much higher among Indian males (48%) but is also a growing concern among the female population (20%).²

Nicotine present in both smoked and smokeless form of tobacco produces neuro-physiological alterations in the brain leading to temporary pleasure for the user. It produces corticosteroids and endorphins that act on various receptors of the brain thus making it very difficult for a habituated tobacco user to quit smoking. Tobacco dependence is defined as, “Cluster of behavioral, cognitive and physiological 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”.³

Once the user attempts to quit, the withdrawal symptoms start within a few hours of smoking the last cigarette hence they become trapped in a vicious cycle. The appropriate protocol should be followed by the oral physician while attempting to deaddict tobacco user with positive support and compassion.

The purpose of this article is to highlight the deaddiction techniques practiced by the oral physician in the clinical setting and how to overcome the barriers in a step by step process.

STEP 1: Identifying the challenges faced by the clinician, patient and the government:

A. Challenges faced by the clinician:
Many challenges faced by the clinician are lack of training in basic counselling, knowledge of drugs used in deaddiction and scheduling a regular follow up of the patient.

B. Challenges faced by the patient:
The patient is also equally faced by many challenges such as psychological stress, anxiety, craving, withdrawal symptoms, peer pressure, lack of motivation and reduced hunger.

C. Challenges faced by the government:
Deaddicting a patient in India is even more challenging as the country itself has major production of tobacco which is nearly up to 780,000 tons. Though lot of bans and advertisements have been put up against the use of tobacco it becomes even more difficult when its readily available at a low cost and all over the country (figure 1).⁴

Figure 1
STEP 2: Identifying the different forms of tobacco products. The oral physician should be aware of all the forms of tobacco available in India and the contents in it for a successful deaddiction process.

<table>
<thead>
<tr>
<th>SMOKED</th>
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<tbody>
<tr>
<td>Beedis</td>
<td>Pan-betal quid with tobacco</td>
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<tr>
<td>Cigarettes</td>
<td>Pan Masala</td>
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<tr>
<td>Cigars</td>
<td>Tobacco areca nut and slaked lime preparation</td>
</tr>
<tr>
<td>Cheroots/Dhumti</td>
<td>Mainpurirabacco</td>
</tr>
<tr>
<td>Pipe</td>
<td>Mawa</td>
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<tr>
<td>Hooklis</td>
<td>Tobacco and slaked lime (khaini) Chewing tobacco</td>
</tr>
<tr>
<td>Chillum</td>
<td>Suns</td>
</tr>
<tr>
<td>Hookah</td>
<td>Mishri</td>
</tr>
<tr>
<td>Chuttas</td>
<td>Gul</td>
</tr>
<tr>
<td>Tobacco Water</td>
<td>Bajjar</td>
</tr>
<tr>
<td>Gudhaku</td>
<td>Gadhaku</td>
</tr>
<tr>
<td>Creamy snuff</td>
<td>Tobacco and slaked lime (khaini)</td>
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</tbody>
</table>

STEP 3: Identifying the different types of patient. 1. Unmotivated Patient-Those who are not convinced of the problem or the need for change. Behavioral manifestations are ignoring advice, argumentative and rationalizing in nature. 2. Unwilling Patient – They are not committed to making a change 3. Unable Patient-Those who have actual or perceived ability to make a change but cannot do it on their own.

STEP 4: Understanding the lifecycle of change. It is important for the clinician to understand that people change voluntarily only when they become interested and concerned about the need for change. They become convinced the change is in their best interest. They organize plan of action committed to implement and make necessary sustainable change. It is divided into three stages which include pre-contemplation, contemplation and action.

Pre Contemplation: In this stage the clinician’s primary role is to advise and inform the patient about the ill effects of smoking. Motivational talk’s benefits of quitting smoking are the best interventional approaches during this stage. The users underestimate the risks and thus avoid confrontation to the idea of quitting smoking.

Contemplation: This is the next stage in which smokers consider and plan to quit smoking for the next 6 months. He/she has slowly identified the risks and benefits of quitting smoking. The clinician need to further intervene by motivational strategies and increase the awareness of quitting smoking.

Action: This stage lasts from onset of the efforts till 6 months after quitting. The Patient has taken steps to quit smoking. The clinician can further help the patient to quit by combining motivational strategies together with medication, will power, behavior modification.

STEP 5: Protocol for intervention. According to the agency of Health Research and Quality guidelines and the Trans Theoretical Model (TTM) of behavioral change the FIVE A’s protocol have been found to be effective in the process of tobacco deaddiction.

I. Advises smokers to stop: The clinician should strongly urge all tobacco users to quit by using tones (voice) which are personalized. The clinician can always associate the patient’s tobacco use to their current health, and impact to close family members.

II. Assess the smoker’s willingness to stop: The clinician can use the following questionnaires for quit attempt.

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Readiness to change questionnaire</td>
</tr>
<tr>
<td>10</td>
<td>Framestrome Test of Nicotine Dependence</td>
</tr>
<tr>
<td>11</td>
<td>Alcohol use disorder identification test</td>
</tr>
</tbody>
</table>

III. Assist those smokers who are willing to stop: The clinician should prepare the patient for quitting by setting the quit date ideally within two weeks. Close friends and family members can be priorly informed for support and care. The clinician should anticipate the challenges faced by the patient and be prepared for a patient relapse. It is also important to advise the patient not to spend lot of time in previous places of smoking. The clinician should also review the past relapse experience which will guide the current attempt to quit.
If the patient is undergoing a negative mood or depression gain after quitting is common and appears to be self-strict dieting. The clinician can intervene by recommending physical activity. BRing the patient on pharmacotherapy known to delay prolonged craving or other withdrawal symptoms, consider refer the patient to a specialist. If the patient reports weight gain (examples such as bupropion SR, NRTs, nicotine gum).

2. The Relapse Protocol

Enhancing motivation to quit tobacco by using five steps. A

a) Relevance
The clinician should encourage the patient by explaining the relevance of quitting and its impact on own health, ill effects to the family, and financial benefit. The associated environmental risks include increased risk of lung cancer, heart disease in spouses, and increased risk for low birth weight, SIDS, asthma, middle ear disease, respiratory infections and higher rates of smoking among children of smokers.

b) Rewards
The clinician should ask the patient to identify potential benefits of stopping tobacco use.

c) Roadblocks
The clinician should ask the patient to identify impediments to quitting and note elements of treatment (i.e., problem-solving, pharmacotherapy) that could address barriers.

d) Repetition
The strategies for motivational intervention should be followed every time for the unmotivated patient. Those who have failed in quitting before must be reinforced that it takes several attempts before one is successful in quitting tobacco.

e) Relapse
Relapse can be prevented if there are regular follow-up visits or phone calls with the patient. The patient can identify sources of support within environment or visit organization that offers cessation counseling.

Weight gain is a common complaint from the patients who are undergoing the tobacco deaddiction process. The clinician can intervene by recommending physical activity and strict dieting. He can also reassure that some weight gain after quitting is common and appears to be self-limiting. Emphasize the importance of a healthy diet with plenty of fruits and vegetables. It is also important to maintain the patient on pharmacotherapy known to delay weight gain (examples such as bupropion SR, NRTs, particularly nicotine gum).

Step 7: Prescribing pharmacotherapy for smoking cessation. The choice of medication depends on adverse effects, medical contraindications, psychiatric morbidity, concurrent medication, cost, patient preference and prescriber comfort.

The dosages of pharmacotherapeutic drugs;
The drugs are available in two forms.
I. Nicotine Replacement Therapy (NRT)
II. Non Nicotine Replacement Therapies (NON NRT)

I. Nicotine Replacement Therapy (NRT):

They are available in gums, lozenges, patches (transdermal), nasal sprays and inhalers.

A. Nicotine gums
Nicotine gum has been available by prescription since 1985 and over the countersince 1996.12 If the patient smokes less than 15 cigarettes per day the starting dosage should be 2mg and if it is greater than 15 cigarettes per day the starting dosage should be 4mg. Dosage is 1 gum every 1-2 hour for the first 6 weeks, 2-4 hours for 3 weeks, 4-8 hours for higher rates of smoking 3 weeks.

Patient should be educated on how to chew the gum until a peppery taste or tingling sensation is felt and to park the gum near the oral mucosa to facilitate the absorption. It should be repeated for about 30 minutes.14, 15

B. Nicotine Lozenge
If the patient smokes the first cigarette less than 30 minutes on waking the starting dose should be 4mg and if he smokes after 30 minutes on waking the dose should be 2mg. The lozenge is allowed to dissolve in saliva for 30 minutes and patient is advised not to drink or eat 15 minutes before using it. It has 25% more nicotine than gum.

C. Nicotine nasal spray
It was first approved in the year 1996 which delivers nicotine more rapidly. The patient should be properly educated about the usage of the inhaler. One spray of 0.5 mg is to be sprayed into each nostril. Patients may use 1 or 2 doses per hour, but they must be advised not to exceed 5 doses per hour or 40 doses per day.16, 17

D. Nicotine patch
The starting doses are 21 to 22 mg (24-hour patch) for heavy smokers and 15 mg (16-hour patch) for light smokers.

II. Nicotine Replacement Therapies:
Bupropion: (Trade Name: Zyban).18

It is an antidepressant that inhibits adrenergic and non-adrenergic uptake. The dosage starts at 150mg once daily and later twice daily on the third day. Bupropion should be continued 7-12 days after quit date and maintained up to 6 months. The drug has to be discontinued if there is no significant improvement by 7 weeks. The side effects include dry mouth, insomnia and risk of seizure.

STEP 8: Coping with withdrawal symptoms
Withdrawal symptoms are always anticipated and hence the clinician should also be ready to counsel, educate and support the patient by prior recommendations.

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- Irritation - Take deep & slow breaths
- Trouble sleeping - Avoid tea, coffee.
- Poor concentration - Taking a walk, break into easy schedule.
- Tiredness - Plenty of sleepwalk, exercise.
- Constipation - Plenty of fluid, fibers

Step 9: Identifying the nearest tobacco cessation centers.¹⁹
The oral physician can utilize the following list of tobacco cessation centers for referral of patient and effective cessation.

<table>
<thead>
<tr>
<th>PLACE</th>
<th>STATE</th>
<th>Tobacco cessation center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangalore</td>
<td>Karnataka</td>
<td>National Institute of Mental Health and Neurosciences (NIMHANS)-Main headquarters in India</td>
</tr>
<tr>
<td>Bhopal</td>
<td>Madhya Pradesh</td>
<td>Jawaharlal Nehru Cancer Hospital &amp; Research Centre</td>
</tr>
<tr>
<td>Anand</td>
<td>Gujarat</td>
<td>Shree Krishna hospital and PSM college</td>
</tr>
<tr>
<td>Chennai</td>
<td>Tamil Nadu</td>
<td>Cancer Institute (Adyar Cancer Institute)</td>
</tr>
<tr>
<td>Panaji</td>
<td>Goa</td>
<td>Vaidya Hospital</td>
</tr>
<tr>
<td>Guwahati</td>
<td>Assam</td>
<td>Dr. Bhubaneswar Borooah Cancer Institute (Regional Institute for Treatment and Research)</td>
</tr>
<tr>
<td>Aiswal</td>
<td>Mizoram</td>
<td>Directorate of Hospital and Medical Education</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>Telangana</td>
<td>MNJ institute of Oncology and Regional Cancer Center</td>
</tr>
<tr>
<td>Mumbai</td>
<td>Maharashtra</td>
<td>Tata Memorial Hospital</td>
</tr>
<tr>
<td>Thriruvananthapuram</td>
<td>Kerala</td>
<td>Regional Cancer Centre, Thriruvananthapuram</td>
</tr>
<tr>
<td>Dilshad Garden</td>
<td>Delhi</td>
<td>Institute of Human Behaviour &amp; Allied Sciences (IHMAS)</td>
</tr>
</tbody>
</table>

3. Conclusion
Precancerous conditions and oral cancers are always linked to the use of tobacco. Advising patients to quit tobacco use is a dental professional responsibility and the oral physician should take an active role in deaddiction. Deaddicting a tobacco patient is often tedious and hard task. Though often we claim to provide counselling for the tobacco addicted patients it is rare that we follow a step by step procedure towards the deaddiction process. Therefore it is important to know the challenges faced by the oral physician and solutions for it.

References