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

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Abstract: ***India is known to have of the highest rates of oral cancer in the world. By 2020 it is predicted that 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 deaddcition 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 thatthe 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 brainleading 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 cigarrete hence they become trapped in a vicious cycle.The appropriateprotocol should be followed by the oral physician while attempting todeaddcit tobacco user withpositive support and compassion.

The purpose of this article is to highlight the deaddcitiontechniques practicedby the oral physician in the clinical setting and how to overcome the barriers ina 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 deaddcition 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, anxietycraving, withdrawalsymptoms, 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.[5]
The oral physician should be aware of all the forms of tobacco available in India and the contents in itfor a successful deaddcition process.

SMOKED:	SMOKLESS
• Beedis • Cigarettes • Cigars • CherootsDhumti • Pipe • Hooklis • Chillum • Hookah • Chuttas	• Pan-betel quid with tobacco • Pan Masala • Tobacco areca nut and slaked lime preparation • Mainpurirabacco • Mawa • Tobacco and slaked lime (khaini) Chewing tobacco • Suns • Mishri • Gul • Bajjar • Gudhaku • Creamy snuff • Tobacco Water

STEP 3: Identifying the different types of patient.[5]
1. Unmotivated Patient-Those who arenot 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 haveactual or perceived ability to make a change but cannot doon his own.

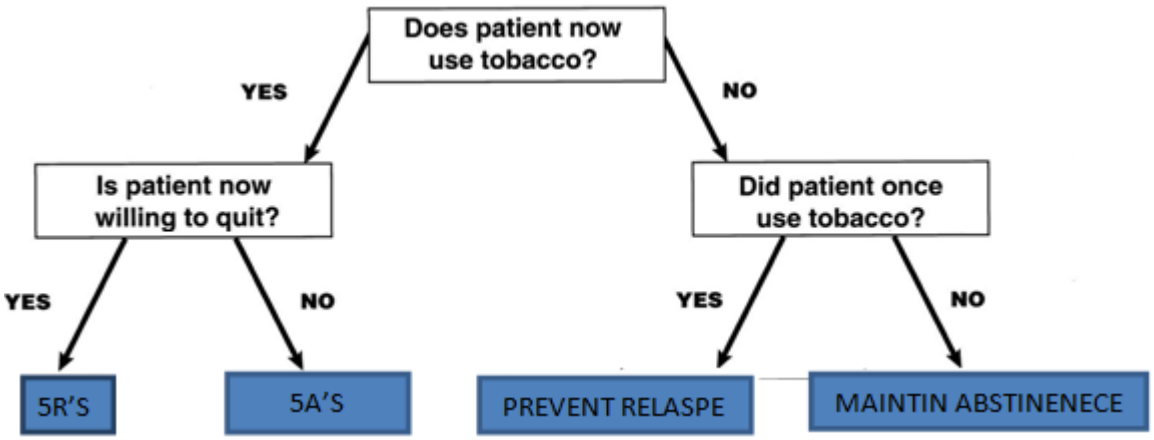
STEP 4: Understanding the lifecycle of change. [6]
It is important for the clinician to understand that people change voluntarily only when they become interested and concerned about the need for change.Theybecome convinced the change is in their best interest .They organize planof action committed to implement and make necessarysustainable 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.[7]



STEP6: Helping the patients who are willing to quit: [6, 8]
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 deaddcition.

I. Advisesmokers to stop:
The clinician should stronglyurge all tobacco users to quit byusing 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.

- Readiness to change questionnaire.[9]
- Fragestrome Test of Nicotine Dependence.[10]
- Alcohol use disorder identification test.[11]

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.

IVArrangefor follow-up:
Individual counselling should be done in 4 sessions for at least 15 minutes for the first three months followed by 4 telephonic conversations for the next three months with regular follow up. The actions during follow-up contact should start by always congratulating the patient for his/her attempt on every visit and further motivate the patient .If relapse has occurred, review the circumstances which lead to the relapse and follow the scheduled protocol .

2. The Relapse Protocol

Enhancing motivation to quit tobacco by using five steps. [8]

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.

If the patient is undergoing a negative mood or depression provide counseling, prescribe appropriate medications, or refer the patient to a specialist.Ifthe patient reports prolonged craving or other withdrawal symptoms, consider extending the use of an approved pharmacotherapy to reduce strong withdrawal symptoms.[7, 8]

Weight gain is a common complaint from the patients who are undergoing the tobacco deaddcition 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).

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Step7: Prescribing pharmacotherapy for smoking cessation.[12]
The choice of medication depends on adverse effects, medical contraindications, psychiatric morbidity, concurrent medication,cost, patient preference and prescriber comfort.

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

I. **Nicotine ReplacementTherapy (NRT):**

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

A. Nicotine gums
Nicotine gum has beenavailable by prescription since 1985 and over the countersince 1996.[13]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 parkthe 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 4mg and if he smokes after 30 minutes on waking the dose should be 2 mg. The lozenge isallowed 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 year1996 whichdelivers 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 perhour 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.NON 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 andlater twice daily on the thirdday. 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.

STEP8: Coping with withdrawal symptoms
Withdrawal symptoms are always anticipated and hence the clinician should also be ready to counsel, educate and support the patient byprior recommendations.

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

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

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

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 anactive role in deaddcition. 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 deaddcition process. Therefore it is important to know the challenges faced by the oral physician and solutions for it.

References

[1] Nathan J G, Rajesh S, Rajkumari S.Tobacco Usage in Uttarakhand: A Dangerous Combination of High Prevalence, Widespread Ignorance, and Resistance to Quitting,Biomed Research Internationaljan 2015;article ID 132120.
[2] Ministry of Health and Family Welfare, Global adult tobacco survey 2009-2010.
[3] World Health OrganizationInternational Statistical Classification of Diseases and Related Health Problems 10th Revision.
[4] Jandoo T, MehrotraR.Tobacco control in India: present scenario and challenges ahead Asian Pac J Cancer Prev. 2008 Oct-Dec;9(4):805-10.
[5] India Cancer Initiative.Tobacco use in India:An evil with manyfaces.www.cpaaindia.org/infocentre/acs/eng/Tobacco/htmlaccessed on Jan 12 2015.
[6] Nimhansresousres ,center of addcition medicine www.nimhans.kar.nic.in/deaddiction/html/resources .htm accessed on jan 21 2015.
[7] Tobacco Use and Dependence Clinical Practice GuidelinePanel, Staff, and Consortium Representatives. A clinical practice guideline for treating tobacco use and dependence: AUS Public Health Service report. JAMA 2000;283:3244-3254.
[8] Virginia P,Effectiveness of the 5-As Tobacco Cessation Treatments in Nine HMOs.Journal of General Internal Medicine, 24(2), 149–154. doi:10.1007/s11606-008-0865-9.
[9] NickH.Readiness questionnaire users manule.www.ndarc.med.unsw.eduaccesedonjan 12 2015.
[10] Etter JF,Validity of the Fagerström test for nicotine dependence and of the Heaviness of Smoking Index among relatively light smokers.
[11] JB Saunder,Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II,Addiction Volume 88, Issue 6, pages 791–804, June 1993
[12] Schauffler HH, Mc Menamin S, Olson K, Boyce-Smith G, Rideout JA, Kamal J. Variations in treatment benefits influence smoking cessation: results of a randomized controlled trial. Tob Control 2001;10:175-180.
[13] Etter J.Dependence levels in users of electronic cigarettes, nicotine gums and tobacco cigarettes.Drug Alcohol Depend. 2015 Feb 1;147:68-75
[14] Schauffler HH, Mc Menamin S, Olson K, Boyce-Smith G, Rideout JA, Kamal J. Variations in treatment benefits influence smoking cessation: results of a randomized controlled trial. Tob Control 2001;10:175-180
[15] StateMedicaid coverage for tobacco-dependence treatments–United States, 1998 and 2000. MMWR Morb Mortal Wkly Rep 2001;50:979-982.
[16] Wetter DW, McClure JB, de Moor C, Cofta-Gunn L, Cummings S, Cinciripini PM, Gritz ER. Concomitant use of cigarettes and smokeless tobacco: prevalence, correlates, and predictors of tobacco cessation. Prev Med 2002; 34:638-648.
[17] AnczakTobacco Cessation in Primary Care: Maximizing Intervention Strategies Clin Med Res. Jul 2003; 1(3): 201–21.
[18] Shelton RC,What are the comparative benefits and harms of augmentation treatments in major depression?J Clin Psychiatry. 2015 Apr;76(4).
[19] Tobacco cessation clinic.wikipedia. www.en.wikipedia.org/wiki/Tobacco_cessation_clinic. accesed on jan 12.2015.