Case Report

Behavioral therapy and pharmacotherapy: A case report on right approach for tobacco cessation

ABSTRACT

Tobacco is one of the leading causes of various types of cancer, and more than five million people die globally from its ill-effects every year. It is reported that by the year 2040, tobacco-related deaths will exceed ten million annually. Smoking cessation programs are considered very useful in helping tobacco users to quit, but it is a very difficult addiction to break; thus effective approaches are required. The authors present a case of an 84-year-old male patient who was a chronic smoker and used to smoke 35–40 bidis per day. He started to notice the physical addiction and withdrawal symptoms due to which he was not able to quit tobacco on his own. After expert counselling, his habit of smoking gradually decreased and after a few months, he was able to quit tobacco completely with the help of behavioral modification and pharmacotherapy.

KEY WORDS: Behavioral modification, Chronic smoker, Nicotine addiction, Quit tobacco, Tobacco counselling, Varenicline

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INTRODUCTION

Tobacco products are a well-established cause of oral cancer, which is one of the most common cancers in India and the third most common type of cancer in South-central Asia.[1] Many countries are making progress in the fight against tobacco, but the latest World Health Organization (WHO) report showed that some are not addressing nicotine and tobacco products and failing to regulate them.[2] The burnt tobacco smoke contains a large number of chemicals that are harmful to both smokers as well as non-smokers. Tobacco is one of the legal consumer products that harm almost everyone exposed to it and kill half of those who either use it or are exposed to it.[3] All tobacco-related diseases including asthma, chronic obstructive pulmonary disease (COPD), and coronary artery disease are known to reduce lung capacity and impair the immune system of the body.[4] Hence, this case report was planned to brief about ill-effects of tobacco and help in quitting bidi with the help of behavioral therapy and pharmacological support.

CASE PRESENTATION

An 84-year-old male patient reported to the private hospital with a medical history of chronic obstructive pulmonary disease (COPD), hypertension from past 25 years and bipolar disorder. He reported to the hospital with 35–40 bidis per day from the past 55 years. He had attempted to quit bidi more that 15–20 times, but was unsuccessful every time. He even tried nicotine gums and patches, but that too was ineffective. In his family, his wife always nagged him to leave this habit, but he never been successful. The patient is living in joint family and children are also infected with passive smoking, which makes his family more worried. His daughter always tried to seek some medical help but that too was in vain. He himself was frustrated from his habit, but now it became the need for the body. If patient did not get bidi, he had severe withdrawal symptoms like irritation, severe cravings, constipation, poor concentration, depression, etc.

After taking the general history, authors did the Fagerstrom addiction stage assessment. Fagerstrom Test for Nicotine Dependence[5] is a standard instrument for assessing the intensity of physical

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addiction of nicotine. Table 1 shows the initial assessment and addiction level of nicotine by Fagerstrom test.

On oral examination, nicotine stomatitis (smoker's palate) was present on the palate and buccogingival region; stained teeth and calculus was present on lingual side, attrition was generalized and severe halitosis. Lymph nodes were non-palpable. Mouth opening was restricted to 20 mm.

Due to his history of minimal response to standard dose monotherapies, he was advised to start varenicline (Champix), which is a non-nicotine medication. Patient was explained the dose of Champix; once daily for first 3 days then twice daily for next 4 days of 0.5 mg. Then after 1 week, twice daily for 12 weeks of 1 mg was prescribed. We also gave him 45 min session for behavioral management by modifying his daily lifestyle routine. Tobacco Cessation Specialist identified the main triggers by asking the patient about his daily routine. The main triggers were within 5 min after sleep, before going to washroom, after each meal, with afternoon tea, watching TV, and before going to sleep at night.

After taking the brief history, patient routine was modified to drink two glasses of lukewarm water in the morning and then do some physical exercise for 30 minutes in the form of walking, yoga, cycling, etc., which helps to keep him busy and further changes were explained according to the 7 D's. Patient was explained 7 D's which included drink plenty of water, do meditation (10 rounds) 5–6 times a day whenever he had severe cravings, delay the craving as much as possible, distract his mind, diet modification, discuss if any difficulty, and start on drugs which help him to control his cravings.

Regular follow-up was held in the form of WhatsApp messages (daily), telephone (twice every month), group discussions (once in a month) by the quit coaches. After two days, telephonic conversation was held, patient was asked about the frequency of bidi and about the withdrawal symptoms. He was not able to reduce even one bidi and he had severe withdrawal symptoms. He complained of dullness in the body, constipation, headache, severe cravings, reduced appetite, and shivering in the body. Quit coach was allotted to take care of his problems and help him to cope with his difficulties. After one week, patient was recalled to the hospital, and the specialist told him not to worry and lets begin this difficult journey together. He was asked about the roadblocks which he was facing, and the patient said that he had difficulty in quitting his after meals bidi. The doctor then advised to replace bidi with green tea, sauf, mishri, or sugarfree chewing gums, and do slow walks for 15 minutes. The patient also found difficulty in quitting night bedtime bidi. He was then advised to read the newspaper (as he liked to read) or talk to their loved ones, or watch his favourite old movie, and also asked him not to go to the tobacco shop as it might become a trigger. Patient was reminded again to follow the 7 D's carefully.

Table 1: Initial Assessment Results and Addiction Level of Nicotine

Measures	
Age of onset of smoking	29 years
Bidi frequency	35-40 bidis/day
Carbon Monoxide level	8
Score of Fagerstrom Stage	10
Nicotine Dependence	High
Physical Dependence	Strong
Withdrawal Symptoms	Reduced appetite, severe cravings, constipation, headache etc.
Pharmacotherapy	Recommended

After one-month follow-up, patient was successful in reducing 15 bidis per day. Patient himself was happy and grateful to the team. Patient was advised to announce about the decision of quitting tobacco to his old friends, family, tobacco vendor, and neighbors who will later help to keep him motivated. He started the medication after 10 days of initial counselling and cravings were controlled with the help of these drugs. Now, doctor advised the patient to go cold turkey (to stop the smoking habit abruptly). On telephonic call after 1.5 months, he was unable to quit completely but he was successful in reducing 15 bidi more. Now it was very difficult for him to reduce further. Quit coaches helped him and supported him in this difficult situation. The patient promised that he won't lose hope and will try again.

After two-months follow-up, patient complained of difficulty in quitting his mid-morning, evening and bedtime bidi. Then specialist changed his dosage timing to the maximum craving time and at night. Patient was told strictly to go cold turkey because sometimes patients are not ready to quit, due to fears of withdrawal symptoms. Telephonic conversations helped him a lot to keep a watch, and finally he quitted from the very next day.

After three-months, patient was recalled again and he finally quit tobacco and also started noticing the benefits of quitting. The patient's taste improved and intraoral condition was also improved slightly, as it took a long time to heal the oral tissues; thus, proper bushing, chlorhexidine mouthwash and oral prophylaxis was advised further. Also, he started doing morning walks in three months' time period and he feels more active throughout the day. Varenicline was stopped after 12 weeks, and patient was completely fine.

After six-month follow-up, patient was completely free from the addiction but sometimes crave for tobacco, that too for shorter duration. Patient and his family members were very happy and he is living his old age with full enjoyment and full of activeness throughout day. After one-year follow-up, patient's craving was controlled completely and he did not feel any further cravings.

DISCUSSION

Treating tobacco dependence is the most effective way to reduce tobacco-related deaths and disability. Behavioral counselling and pharmacotherapy have been shown to increase chances of quitting smoking.[1] Here, we report a case of an 84-year-old male, a chronic smoker who used to smoke 35–40 bidis a day for the past 55 years.

In tobacco, nicotine is the most addictive substance. Nicotine resembles the naturally occurring neurotransmitter acetylcholine, which sufficiently attaches itself to a subset of neuronal receptors for neurotransmitter in the brain known as nicotinic acetylcholine receptors. These receptors are present in the midbrain and release another neurotransmitter called dopamine. Dopamine release is believed to be central to all addictive behaviors which gives a "wow" feeling. That is why after reducing one or two cigarettes or bidis, the patient experiences withdrawal symptoms like increased appetite, constipation, mouth ulcers, cough, weight gain, etc.[6] In this patient as well, there were severe withdrawal symptoms like irritation, severe cravings, constipation, poor concentration, depression, headache, etc., which lasted for almost three months.

Anxiety, depression, and bipolar disorder are examples of mental disorders that affect a person's mood, thoughts, and behavior. In a study done by El-Sherbiny NA *et al.*,[7] it was observed that smoking was linked to psychological symptoms and showed moderate-to-high level of dependence. Thus smoking cessation programs are recommended to keep individuals motivated and to work on barriers which affect normal living. In the present case, the patient has bipolar disorder and depression which affect his daily life activities.

COPD is commonly seen in tobacco users. In the current case, the patient had COPD for the past five years and was under regular medication. It is also evident from the systematic review report that tobacco smokers are 4.01 times more likely to develop COPD than non-smokers (RR, 4.01; 95% CI, 3.18–5.05).[8] Thus, it is clearly advisable that COPD can be reduced by tobacco cessation at an early stage via proper intervention and treatment.

The goal of nicotine replacement therapy (NRT) is to reduce the symptoms of tobacco withdrawal. NRT increases the chances of quitting smoking by 1.5–2 times. NRT comes in several forms, which increases the chances of long-term success rate. Whereas varenicline is a non-nicotine medication designed for treatment of tobacco cessation and improves the chances of success by about 50%, more than bupropion or single-form NRT. Varenicline often leads to sleep disturbance and nausea. Other adverse effects include weakness, insomnia, constipation, unusual dreams, indigestion, etc. But these symptoms are easily manageable with the help of medication and behavioral modification.[9]

Evidence shows that behavioral interventions can help tobacco users to de-addict. Thus, behavioral support (encouragement, advice, and discussion) and group counselling, at least once for 4 weeks, increase the chances of long-term success rate.[9] Additionally, telephone support also improves rates of success for tobacco cessation.[10] Telephonic counselling has potential to provide access to information to a large number of people easily. It is also helpful in planning quit attempts, to overcome the particular situation where the patient has severe cravings, and also help to prevent relapse in frustrating situations.

CONCLUSION

Nicotine addiction is the major factor impeding tobacco cessation and long-term abstinence. Nicotine acts on the brain to create urges to smoke in situations where smoking would normally occur and when brain nicotine levels become depleted. Varenicline is considered to be the most effective drug for treating tobacco use; however, it continues to be prescribed less often than indicated. By not consuming tobacco, the patient might have withdrawal symptoms for a few days which are easily manageable with the help of behavioral counselling.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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