



NICOTINE CONTAINING TOOTH POWDER DEPENDENCE

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ABSTRACT

Nicotine is available in India in many forms. It has the same addictive potential as smoking. We report a case of nicotine containing tooth powder with psychiatric and physical comorbidity who was successfully treated.

KEYWORDS: Nicotine containing tooth powder, dependence, comorbidity, treatment.

INTRODUCTION

Nicotine use is the most common form of addiction of the world^[1]. Nicotine withdrawal symptom includes headache, nausea, constipation or diarrhea, falling heart rate and blood pressure, fatigue, drowsiness, insomnia, irritability, difficulty concentrating and anxiety.^[2] Symptoms usually present within 2-3 hours of abstinence and reaches peak within 2-3 days in chronic heavy smokers. Nicotine containing tooth powder dependence has rarely been reported as it is not available in other countries. We report a rare case of nicotine containing tooth powder dependence who also developed comorbid physical and psychological symptoms.

CASE REPORT

A 48-year married housewife of lower socio-economic status was brought by his husband to dental outpatient department with complaint of using tooth powder 30 to 40 times a day. She developed this habit after her neighbour suggested the nicotine containing tooth powder for toothache (Fig 1). She started using this powder frequently and developed a habit for last six months. On discontinuing, she used to develop irritability, low mood, loss of appetite, change in bowel habits and weight gain. She was referred to psychiatry outpatient department for treatment. On detailed history, she was diagnosed as a case of nicotine dependence on ICD – 10 (F17.22). There were also symptoms suggestive of comorbid generalized anxiety disorder (tremors, palpitations, heaviness in head and chest, sweating, epigastric discomfort, sleeplessness, decreased appetite, occasional nausea, restlessness and irritability) of four months duration. She had consulted a physician about four months back for complaints of severe anxiety and insomnia. She was given some medication and asked to consult a dentist for discolouration of teeth but she did not follow the instructions. She had motivation for

treatment of anxiety and discolouration of teeth. Past and family history was not suggestive of any psychiatric disorder, drug dependence or chronic medical illness.

On examination, she was oriented to time, place, and person with, pulse rate of 120/minute and blood pressure 150/110 Hg. Systemic examination revealed discomfort in epigastric area, tremors, and sweating and there was discolouration of teeth (Fig 2). On mental state examination, the patient was well kempt and anxious.

Investigations including haemogram, liver, renal and thyroid function tests, serum electrolytes, lipid profile, blood glucose, urine microscopy, chest X-ray and ultrasound abdomen were within normal limits. ECG showed sinus tachycardia.

Patient was diagnosed as suffering from nicotine dependence and started on tablet bupropion 150 mg per day after breakfast, tablet propranolol 40 mg daily and tablet lorazepam 3 mg in divided doses. On following her up, he reported reduction in craving for nicotine containing powder. Patient was also given counselling to discontinue nicotine containing powder as they were attributing to his physical and psychiatric symptoms and discolouration of teeth. After four weeks, the patient was abstinent, leading to improvement of anxiety, insomnia and other physical symptoms. Patient has been maintaining well and Abstinent for past 3 months in follow up, with no residual symptoms.

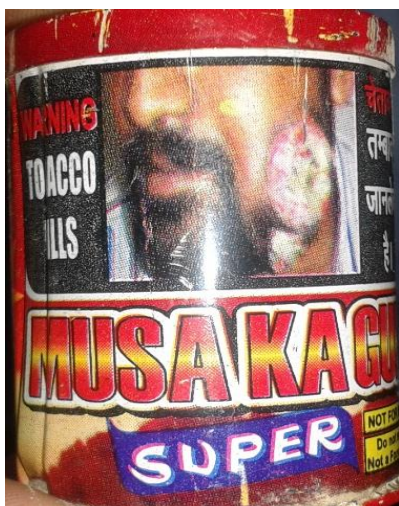


Fig 1: Nicotine containing tooth powder



Fig 2: Discoloration of teeth

DISCUSSION

Nicotine containing tooth powder is available in market and can produce dependence as it is absorbed through oral mucosa. The dependence is similar to nicotine lozenges reported in about 10% users.^[4,5] In early phase, it is usually aversive and causes irritation of tongue, mouth and throat. The pharmacological effects are same as of nicotine.^[6-8]

In the present case, the patient developed habit of using tooth powder to an addictive level and developed physical and psychiatric complications.

Bupropion, varenicline and off label-drugs (nortriptyline, clonidine) are available to treat nicotine dependence.^[9] The present case was successfully treated with bupropion. Bupropion is a weak inhibitor of dopamine and noradrenaline reuptake, and has also been shown to antagonise nicotinic acetylcholine receptor function. It controls the withdrawal symptoms following smoking cessation.^[10]

CONCLUSION

Nicotine is a drug with high addictive potential and social sanction. Nicotine containing tooth powder carries

the risk of causing dependence and other psychiatric and physical complications. The physicians, psychiatrists and Dentists should be aware about its use to consider it in differential diagnosis.

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