

Case Report

An Unusual Case of Baclofen Abuse

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ABSTRACT

Baclofen was initially used for the treatment of spastic conditions. Last decade has seen its emergence as a treatment of profound interest in alcohol dependence, opiates and cocaine abuse, and tobacco addiction. However, the published literature on baclofen abuse is sparse. Here, we report a patient with baclofen abuse.

Key words: Abuse, baclofen, dependence, smoking cessation

INTRODUCTION

Reports on the abuse of baclofen are rare. We describe a case of unusual presentation of baclofen dependence.

CASE REPORT

A 24-year-old male “X,” smoking 24 cigarettes per day (CPD) attended our outpatient department for smoking cessation. He was referred to us by the physician who treated his lower respiratory tract infection. He expressed craving, anxiety, insomnia, difficulty in defecation, and mild tremor on reducing the number of smoked CPD. He was diagnosed to have primary nicotine dependence without any comorbid psychiatric illness. He was put on nicotine chewing gum 2 mg 3 times a day and baclofen (Liofen XL) 20 mg at night. He acknowledged the lack of craving for nicotine when he came for review a week later. His hostel mate disclosed that he was taking more than the prescribed dose of baclofen. After initial

denial, “X” accepted the increased intake to be three tablets instead of one. He was advised to adhere to the prescription and return for review after 2 weeks. Before his next appointment, his hostel mate came to us and complained about the daily abuse of drugs. Interview with “X” revealed abusive intake of 20 tablets of 30 mg making a total dose of 600 mg baclofen every day. He described the sense of wellbeing and pleasure without apparent reason after baclofen ingestion and also craving for the drug. Under supervision, the dose was tapered to 400 mg/day. That day night, he complained of insomnia, irritability, anger outburst, and tremor of upper extremities. He was suggested gradual tapering of dose. He was put on quetiapine 100 mg and baclofen was gradually tapered. He was excessively anxious for the first 6 days. Zolpidem 5 mg was introduced for a week and later stopped. At present, the patient is maintained on quetiapine 100 mg. He is under motivational therapy and put on

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bupropion 150 mg in view of the history of nicotine dependence and anxiety symptoms.

DISCUSSION

Baclofen is a centrally acting skeletal muscle relaxant. A selective gamma-amino butyric acid_B (GABA_B) agonist, it is used widely in the treatment of spastic disorders. Baclofen in high doses can remarkably produce a state of indifference toward alcohol.^[1] It has shown preclinical and clinical evidence in treating tobacco addiction as well.^[2] Baclofen quietens the dopaminergic afferents and indirectly tackles the dopamine surge occurring in the ventral striatal regions due to drug abuse. Evidence-based reports state that chronic administration of baclofen reduces the drug-motivated behaviors in opiate, amphetamine, and cocaine abuse. The commendable decrease in the reinforcing properties of nicotine at a low dose of 20 mg 4 times daily makes it a promising drug in the pipeline for smoking cessation.^[3]

Despite being in clinical use for several years, reports on baclofen abuse are less. The paradoxical euphoria produced by baclofen maps to the abuse potential of this drug. The role of gamma-hydroxybutyrate (GHB) receptor in producing euphoria has to be evaluated. Winter opined that of all the GABAergic ligands studied, baclofen tended to occasion the greatest GHB-appropriate responding (70%).^[4] Kamal *et al.* described a GHB-dependent patient, who co-ingested baclofen with GHB and developed a rapid coma, bradypnea, and hypotonia.^[5] This patient “X” exhibited dependence on a high dose of baclofen (600 mg/day) owing to its euphoric effect. Psychological and physical dependence characterized by craving and withdrawal effects temporally correlate with baclofen withdrawal. de Beaurepaire discusses a patient with baclofen use 630 mg/day (against medical advice) for a month and a half until he developed acute delirium, agitation, and facial hematoma. He also discusses a patient who had stimulant effect with 310 mg/day making him placid and less aggressive.^[6]

Doses higher than 300 mg/day are useful clinically in alcoholics with mostly benign side effects. The side effects of baclofen are often transient. It includes sedation, dizziness, weakness, nausea, headache, skin rash, itching, shortness of breath, problems in micturition, bowel changes, irregular heartbeat, and chest pain.^[3] Massive overdosage is characterized by central depression, hypothermia, hypoventilation, flaccidity, bradycardia, and hypotension.^[7] Abrupt cessation can result in mild muscle spasms to

life-threatening seizures and multi-system organ failure.^[8] Tapering is necessary to avoid baclofen withdrawal. The patient “X” developed insomnia, irritability, anger outburst, and tremor of hand even when the dose was slowly tapered and stopped.

Lile *et al.* evaluated the separate and combined effects of baclofen 25/50 mg and Δ^9 -tetrahydrocannabinol (THC) and opined that large dose baclofen alone occasioned Δ^9 -THC-appropriate responding.^[9] Increased drug liking and relaxation following baclofen administration in smokers have been reported. An acute dose of 20 mg of baclofen can decrease the palatability of cigarettes.^[10] The patient might have substituted his cigarette with baclofen resulting in massive overdose of the drug. Although its ready availability and good tolerance can make it an effective smoking cessation aid, the same can increase its chances of being used as a drug of abuse.

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Conflicts of interest

There are no conflicts of interest.

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