

Case Report

Escitalopram Induced Bruxism: A Case Report

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Abstract: The report describes a patient suffering from somatoform disorder, who developed bruxism on treatment with escitalopram, a selective serotonin reuptake inhibitors (SSRIs). During the initial stages of the therapy, the patient experienced decreased anxiety and nervousness with normalized sleep pattern. With the gradual progress of the regimen, the patient reported excessive grinding of teeth followed by clenching of the jaw and aching jaw muscles. A grinding or tapping noise during sleep was noticed by his wife, which was reportedly so loud and unpleasant that kept her awake. Lip biting and cheek biting were also reported. On reporting the problem followed by reduction in dosage regime, patient experienced improvement in his condition and was then put on buspirone therapy. Though the aetiology of such bruxism remained unclear, the imbalances in dopaminergic and serotonergic activities in the central nervous system is mostly implicated. The present case report highlights an incidence of development of bruxism in a patient who was on SSRI therapy.

Keywords: Bruxism, Escitalopram, Parafunctional activity, Selective Serotonin Reuptake Inhibitors.

INTRODUCTION

Bruxism is an oral parafunctional activity characterized by excessive grinding of the teeth and/or excessive clenching of the jaw. Bruxism is a common problem with its prevalence ranging from 8–31% in the general population [1]. Several symptoms are commonly associated with bruxism, including hypersensitive teeth, aching jaw muscles, orofacial pain and headaches. Bruxism may cause excessive tooth wear, and even the damage or tooth fractures and repeated failure of dental restorations such as fillings, crowns, etc.

The report describes a patient suffering from somatoform disorder, who developed bruxism on treatment with escitalopram, a selective serotonin reuptake inhibitors (SSRIs).

CASE REPORT

A 45 year old man reported in the outdoor patient unit, Department of Psychiatry, Medical College & Hospital, Kolkata with complaints of increased anxiety, nervousness, insomnia, headache and excessive mood

swings. The patient had no previous history of smoking or substance abuse.

According to the International Classification of Disease: Clinical Descriptions and Diagnostic Guidelines (ICD-10); he was diagnosed a case of F45 somatoform disorder by the practicing physician. Mental status examination (MSE) revealed stooped posture, poor eye contact, depressed, constricted affect, slow, soft, monotonous speech. On HAM-D (Hamilton Depression) rating scale the score was 16 which means mild to moderate depression which further corroborated the diagnosis. He was prescribed Escitalopram 10 mg/day and the dosage was titrated to 20 mg/day after three weeks. The laboratory investigations of routine hematology, blood sugar, lithium test, liver function test and thyroid function test were found to be normal.

During the initial stages of the therapy, the patient experienced decreased anxiety and nervousness. The sleep pattern was even normalized and headache ceased. With the gradual progress of the regimen, the patient reported excessive grinding of teeth followed by clenching of the jaw. The patient reported that such

problem was not present during the initial weeks of the therapy. The patient complained of having aching jaw muscles. A grinding or tapping noise during sleep was detected by his wife, which was reportedly so loud and unpleasant that kept her awake. Lip biting and cheek biting were also reported. The dental examination did not reveal any abnormalities.

On reporting the problem to the concerned physician followed by reduction in dosage regimen, he experienced slight improvement in his condition. Patient was put on buspirone 5mg per night which eventually increased to 10 mg at night. Naranjo algorithm gave a score of 7 which denotes probable Adverse Drug Reaction. Bruxism was found to be resolved within weeks of dechallenge of the regimen. No rechallenge was attempted by the physician, after the withdrawal of the medication. A temporal relationship between Escitalopram and Bruxism was thus established.

DISCUSSION & CONCLUSION

Based on parafunctional activity bruxism is classified into two types– nocturnal bruxism (sleep bruxism) and diurnal bruxism (awake bruxism). The symptoms of sleep bruxism tend to be worst on waking and improve during the course of the day while the symptoms of awake bruxism may not be present at all on waking, and then worsen over the day. Multiple factors have been identified to cause bruxism. Among them stress is increasingly considered as an initiating, predisposing, and perpetuating factor for bruxism. Though the etiology of bruxism remains unclear, an imbalance in the dopaminergic and serotonergic activities in the central nervous system is mostly implicated [2].

Recent findings and literature have suggested that certain psychotropics, such as drugs in the selective serotonin reuptake inhibitor (SSRI), antipsychotic, and general antidepressant classes, have been implicated in inducing this condition as a secondary side effect in patients taking these medications [3, 4].

The neurochemical mechanism underlying the development of bruxism remains unclear. However, recent literatures and investigations have suggested that the central dopaminergic system (especially within the mesocortical tract), which controls muscular or motor activity, may be involved in the pathophysiology of bruxism [5]. It has been hypothesized that the mechanism for SSRI-induced bruxism may involve excessive serotonergic action on the mesocortical neurons arising from the ventral tegmental area. This action leads to a dopaminergic deficit, which causes a specific form of akathisia and akathisia-like movement of the jaw muscles, thereby leading to bruxism [6].

Various documented case studies have reported that patients experienced drug-induced bruxism after being prescribed an SSRI to treat depressive disorders. In one

case study, a 20-year-old woman prescribed paroxetine to treat her diagnosed condition of depression experienced gritting of the teeth and intense jaw tenseness, conditions that are cardinal signs of bruxism and temporomandibular joint dysfunction [7]. A comprehensive search of tertiary resources in the Annals of Pharmacotherapy linked SSRIs to 127 published reports of SSRI-induced movement disorders, which were precursors to bruxism [8]. The antipsychotic haloperidol has also been linked to inducing bruxism. A 40-year-old male with a history of chronic paranoid schizophrenia and a 31-year-old female diagnosed with acute psychosis reported incidences of jaw clenching and contractions consistent with bruxism [9]. Venlafaxine, another antidepressant, has also been linked to this condition. These drugs, indicated to treat mood disorders, caused this unwanted side effect, which is usually treated by discontinuing the suspected psychotropic culprit.

Buspirone is an agonist of the 5-HT_{1A} receptor that increases dopaminergic neuron firing in the ventral tegmental area and increases the synaptic release of dopamine in the prefrontal cortex [6]. These effects ameliorate drug-induced bruxism.

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