

# Sertraline induced mandibular dystonia and bruxism

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## ABSTRACT

Specific serotonin reuptake inhibitors have been associated with the occurrence of drug-induced parkinsonism, dystonia, dyskinesia, and akathisia. Here, we describe a young female patient with a diagnosis of the moderate depressive episode who developed mandibular dystonia and bruxism with sertraline in the absence of concurrent prescription of medications, which have potential action on the dopaminergic system.

**Keywords:** Adverse drug reactions, bruxism, dystonia, sertraline

## Introduction

Sertraline, a selective serotonin reuptake inhibitor (SSRI), is considered to be safe and relatively well-tolerated medication for anxiety and depression. Extrapyrimal symptoms (EPS) could be adverse effects of SSRI, which include parkinsonism, dystonia, dyskinesia, and akathisia.<sup>[1]</sup> Sertraline has been reported to cause akathisia and dystonia, especially in older people.<sup>[1]</sup> Drug-induced bruxism has also been reported with the use of SSRIs.<sup>[2]</sup> Here, we describe a young female patient who developed both mandibular dystonia and bruxism with sertraline.

## Case Report

A 29-year-old married woman who was suffering from sadness, anhedonia and feelings of worthlessness, decreased energy, disturbed sleep, reduced appetite, and impaired concentration visited our outpatient clinic. This patient was diagnosed with mild to moderate depressive episode, and a trial of sertraline was initiated with a morning dose of 50 mg/day. The patient did not have any or family history of movement disorder,

substance abuse, or mental illness. After 15 days at this dosage without adverse effects, the dose was increased to 75 mg/day. During the next follow-up after 3 weeks, the patient showed marked improvement in her depressive symptoms, and she was pleased with this treatment. Meanwhile, she started having “strange involuntary movements of the face” with “forced deviation of the jaw” to the lateral side which was extremely distressing in nature, lasting for few minutes. Tablet sertraline was reduced to 50 mg/day, and the distressing symptoms resolved. However, after 2 months, again she started having distressing movements of the face, though with lesser intensity. Along with it, she started having severe teeth clenching and associated loud grinding noises during sleep most of the days. Tablet sertraline was stopped and tablet agomelatine 25 mg/day was started. The symptoms resolved immediately, and she is maintaining well on tablet agomelatine for the last 3 months.

## Discussion

In this case, the patient developed mandibular dystonia and bruxism with sertraline, and there were no other medications with known effect on the dopaminergic system been consumed. The resolution of both the symptoms after discontinuation of

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sertraline and the Naranjo score of 6 indicates a probable causal relationship.<sup>[3]</sup>

Compared to tricyclic antidepressants, SSRIs have safer side effect profile and also widely used as first-line agents to treat conditions such as depression, social phobia, panic disorder, posttraumatic stress disorder, and obsessive-compulsive disorder, etc., However, one important but least identified side effect due to the use of SSRI is movement disorder such as EPS.

The mechanisms by which SSRIs cause bruxism and dystonia are unclear. However, recent findings indicate that central dopaminergic system may be involved in the pathophysiology of both. It has been hypothesized that SSRIs induce bruxism by excessive serotonergic action on the mesocortical neurons arising from the ventral tegmental area, causing a dopaminergic deficit, leading to bruxism.<sup>[2]</sup> Whereas SSRIs cause dystonia due to the inhibitory effect of serotonergic inputs on the dopaminergic pathways of the striatum.<sup>[1]</sup> The role of basal ganglia and cerebellum has also been described in the etiology of SSRI-induced dystonia.<sup>[4]</sup>

Literature review shows few case reports of SSRI-induced movement disorders such as bruxism and jaw dystonia. Case reports of bruxism developing on venlafaxine, fluoxetine, paroxetine, citalopram, and sertraline are available.<sup>[2,5-7]</sup> Gabapentin or buspirone reduced the Bruxism in most of these patients.<sup>[6,7]</sup> Paroxetine-induced bruxism in an elderly Japanese man with depression was successfully treated by 5-HT<sub>1A</sub> agonist tandospirone.<sup>[2]</sup> The risk of EPSs with newer antipsychotics was increased on addition of a SSRI.<sup>[8]</sup>

A review noted sertraline to be the second most commonly implicated antidepressant next to duloxetine in causing EPS; tremors, dystonia, hypertonia, myoclonus, parkinsonism, and akathisia being the most common.<sup>[9]</sup> Cases are reported in a 25-year-old Indian female and a 17-year-old Turkish female with sertraline-induced acute mandibular dystonia.<sup>[1,10]</sup> Contrary to paroxetine-induced movement disorders, in the first case, the symptoms completely resolved after stopping the sertraline.<sup>[1]</sup> Similar findings were noted in our case report; the sertraline-induced distressing jaw movements with spontaneous resolution after removing the offending agent. The second case received biperiden intramuscular injection for acute relief, which did not recur after stopping sertraline.

As in our case, most of the cases have been with Females who are known to be more vulnerable than males.<sup>[9,11]</sup> Although noted more often in extremes of age, even young and middle-aged person can also experience EPSs with sertraline.<sup>[1,9-11]</sup> Hence, caution is needed in every female patient prescribed sertraline. The acute distressing dystonia could need anticholinergic agents similar to that with antipsychotic agents.<sup>[10]</sup> Gabapentin, buspirone, and tandospirone are the agents reported to be

effective in SSRI-induced bruxism. However, they should be used when symptoms are severe and implicated medicine cannot be removed for some reason. Dose reduction and removal of the offending drug would be the first line of management before attempting other drugs.

Although there are reports of agomelatine induced akathisia, in the present case, agomelatine did not lead to the relapse of the adverse effect by controlling the psychopathology.<sup>[12]</sup> Agomelatine with more of melatonergic and less of serotonergic activity in ameliorating the depression could be a safe and effective alternative in patients sensitive to serotonergic induced EPS.

Thus, the present case describes two rare but important side effects associated with the use of SSRIs co-occurring in a single young female patient. Hence, it is necessary for the clinicians to be aware of this kind of alarming side effect with the use SSRI drugs, which are considered to be safer.

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### Conflicts of interest

There are no conflicts of interest.

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