Exacerbation of Essential Tremor With Sertraline Use

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Essential tremor (ET) is one of the most prevalent debilitating neurologic disorders.[1] Individuals with ET often struggle to finish even simple tasks due to tremor in the upper extremities.[1] Uncommonly, ET may be associated with tremor involving the voice, lower extremities, and head.[2] Various psychotropics have been reported to influence the severity of ET. Psychotropics such as mirtazapine, clonazepam, alprazolam, and clozapine are considered as the second-line therapeutic approaches to ET.[3] On the other hand, bupropion use has been reported to exacerbate ET.[4]

Selective serotonin reuptake inhibitors (SSRIs) are the most commonly prescribed medication for mental disorders such as anxiety and depression. Despite the relative safety, around 20% of patients with no previous history develop tremor with SSRI use.[5] Animal studies also reported exacerbation of experimentally induced tremors in rats.[1] However, there are no reports of the impact of SSRI use among patients with psychiatric conditions who suffer from or are prone to ET. This report highlights the case of a middle-aged woman with ET who was started on sertraline for prolonged grief reaction, which resulted in exacerbation of tremor.

Case Report

A 40-year-old widowed woman presented with persistent and pervasive longing and preoccupation for her deceased husband who died 2 years ago, sadness, inability to experience positive mood, and difficulty in engaging with social or other activities. On physical examination, she had postural tremor in the upper extremities, which started after she lost her husband. Mental status examination revealed depressed affect and depressive cognition. Routine medical and laboratory evaluations were within normal limits. A diagnosis of prolonged grief disorder according to *ICD-11* criteria was made along with a diagnosis of ET. She was prescribed oral sertraline 50 mg/d. She presented for her first follow-up appointment after 2 weeks and reported significant improvement in her symptoms. However, she also reported exacerbation of tremor in her upper extremities and new-onset tremor in her lower extremities after starting the medication. Despite exacerbation in tremor, she continued her medications for 2 weeks given improvements in symptoms and stopped the medication 2 days before presenting for follow-up. She reported significant reduction in tremor in the upper extremities and resolution of tremor in the lower extremities after stopping sertraline.

Discussion

In the present case, there was exacerbation in ET after starting sertraline, and the tremor severity reduced after stopping the drug, indicating a temporal association. Given that the patient's Naranjo algorithm score was 6, the exacerbation of tremor was probably due to sertraline.[6]

There are multiple reports of various types of movement disorders probably associated with SSRI use including tremor, akathisia, dystonia, and parkinsonism.[7] However, no reports were found to date regarding exacerbation of ET with SSRI use. The pathophysiologic mechanism of exacerbation of ET with SSRI use is unclear. However, the modulation of serotonergic pathways at the olive-cerebellar-thalamic-cortical-spinal level might have exacerbated the ET in this case, as multiple studies reported the role of serotonin in the regulation of olivary excitability.[1,7] Moreover, animal studies also reported the role of chronic exposure to SSRIs in exacerbating clinical/experimental tremor in rats, possibly by modulating the serotonergic pathways.[1]

Thus, the present case describes the exacerbation of ET with the use of an SSRI (sertraline). Clinicians should be aware of this possible adverse effect associated with SSRI use among patients with ET and may avoid using them in patients with ET with comorbid psychiatric conditions.

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