



CASE REPORT

Sertraline Induced Stuttering in a Pediatric Patient

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ABSTRACT

An adolescent female was referred to the Developmental and Behavioral Pediatrics clinic for evaluation of anxiety and depression. She was diagnosed with generalized anxiety disorder and major depressive disorder based on the Diagnostic and Statistical Manual-5 (DSM-5) criteria. Evidence-based treatment was initiated, including psychotherapy and pharmacotherapy, with the selective serotonin reuptake inhibitor (SSRI), sertraline. Stuttering was noted with dose titration, which resolved after weaning the dose and discontinuing the sertraline.

The use of SSRIs for the pharmacological treatment of anxiety and depression is considered first-line in the pediatric population; therefore, familiarity with the side effects of SSRIs is essential. SSRI-induced stuttering has been reported in the adult population. We present the first known pediatric case. This case will help pediatric medical providers counsel patients regarding this rare medication side effect and aid decision-making based on preexisting speech and language disorders and possible social implications.

BACKGROUND

The rate of anxiety and depression diagnosed in children ages 6-17 years increased from 5.4% in 2003 to 8.4% in 2011-2012.¹ Furthermore, stressors, such as those associated with the current COVID-19 pandemic, have increased the prevalence of depression and anxiety. According to a meta-analysis done by Racine, et al., during the COVID-19 pandemic, 1 in 4 youths and 1 in 5 youths were found to experience clinically significant depression and anxiety, respectively.² Thus, the need for pediatricians to be familiar with treatment plans, including psychotherapy, pharmacotherapy, and the potential side effects of pharmacotherapy, is essential. To our knowledge, we report the first case of an adolescent with sertraline-induced speech dysfluency, described as stuttering.

PRIMARY OBJECTIVE

Create awareness among pediatricians regarding a less common side effect of antidepressant medications, specifically, stuttering associated with SSRI use, which has not been previously reported in children.

SUBJECT PRESENTATION

A 16-year-old female was referred to the Developmental and Behavioral Pediatrics clinic with concerns about anxiety and depression. She was diagnosed with Generalized Anxiety Disorder (GAD) and Major Depressive Disorder (MDD) based on history and diagnostic criteria as defined in DSM-5. These diagnoses were further supported by elevated scores of 46 on the Screen for Child Anxiety Disorders (SCARED)-Child Version (>25 significant) and 19 on the Patient Health Questionnaire-9 for Teens (PHQ-9) (15-19 = moderately severe depression). She reported a history of bullying at school, exacerbating her anxiety and depression symptoms, which also led to her switching to homeschool instruction. Her psychiatric history was negative for symptoms of hallucinations or symptoms of mania. Her medical history was otherwise unremarkable, and she was not taking any prescribed medications at the time of presentation. She further denied the use of recreational drugs, alcohol, or tobacco. Her family history was negative for mental health, developmental, or speech and language disorders. She was developmentally appropriate for her age and had no history of speech dysfluency or language disorders. She was noted to be well-developed and well-nourished. Vital signs were within normal limits. Her general physical examination, including cardiac, respiratory, and abdominal systems, was normal.

A treatment plan was initiated, including Cognitive Behavioral Therapy (CBT) in combination with the SSRI, fluoxetine, at a low dose of 10 milligrams (mg). After a failed attempt with fluoxetine 10 mg, due to the side effect of nausea, she was switched to the alternative SSRI, sertraline, at the low dose of 25mg daily. At her 2-week follow-up visit, she reported that the sertraline was well tolerated. However, no improvement was noted in her impairing anxiety and depression symptoms. Hence, the dose of sertraline was titrated up to 50mg daily. Approximately three weeks after the dose titration, she presented to our clinic with a new complaint of difficulties with speech fluency, described as stuttering. She reported an overall improvement in her anxiety and depression, but the stuttering was impairing her social functioning, and she requested that the sertraline be discontinued. To minimize side effects from abrupt discontinuation of sertraline, the dose was lowered to the last tolerated dose of 25mg to wean off the sertraline. At her two-week follow-up, she reported resolution of the stuttering while on 25mg of sertraline. Since the symptoms of anxiety and depression were not optimally managed at this dose, sertraline was discontinued, and she was started on another SSRI, escitalopram, at a low dose of 10mg.

Follow-up at four weeks revealed no stuttering, and anxiety and depression symptoms were better controlled. The patient also contemplated returning to school during the upcoming academic year. There was no recurrence of the stuttering over the following year while taking the escitalopram dose of 10mg.

DISCUSSION

Mental health disorders are frequently encountered in pediatrics, and the prevalence of anxiety and depression is increasing among children and adolescents. This has led to an increase in the use of SSRI medications, as they are the recommended first-line pharmacologic treatment modality for pediatric anxiety and depression.^{3,4} As such, awareness of the side effects is essential to the prescriber, the patient, and the family. The known side effects of SSRIs are nausea, insomnia, headache, dry mouth, and, rarely, serotonin syndrome, which is a potentially life-threatening complication. The elimination half-life of sertraline is 22-36 hours.⁵ There have been previous reports of adults with stuttering after initiation of SSRIs. Guthrie et al.⁶ and Messiha et al.⁷ reported fluoxetine-induced stuttering in adults. Christensen et al.⁸ reported a 32-year-old female with stuttering after three weeks of sertraline use at a dose of 50mg. Complete resolution of stuttering was noted within three days of discontinuation of the sertraline, coinciding with the elimination half-life of the drug.⁹ To our knowledge, ours is the first case report of speech dysfluency reported in a pediatric patient after the initiation of sertraline. This might also be dose-specific, where higher doses place the patient at higher risk for developing stuttering symptoms.

The pathophysiology of stuttering is not well understood. The literature points to possible abnormalities in sensory-motor processing.¹⁰ Stuttering or speech dysfluency can be seen in the pediatric population and often resolves before adulthood. Less than 1 percent of adults stutter, and 80% are male.¹¹ Stuttering becomes identifiable when a child learns to talk; sometimes, they may have associated eye blinking, jaw jerking, or other involuntary movements. These symptoms can cause anxiety and embarrassment in an individual.¹² There is no pharmacological intervention that has been successful in the treatment of stuttering. Drug-induced stuttering is also noted with anti-epileptics, antipsychotics, antidepressants, and immunosuppressants.¹³ It is important for all pediatric medical providers to be aware of this rare but significant adverse effect before initiating treatment with this medication.

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