

Development of Restless Leg Syndrome in a Pediatric Patient Treated with Sertraline

Restless leg syndrome (RLS) is characterized by the restlessness of the legs, with an urge to move, which is temporarily relieved by movement and worsened by periods of inactivity and rest. The symptoms are often noticed in the evening and while sleeping at night.^[1] Iron deficiency is often associated with RLS,^[2] and the treatment consists of replenishment of iron level. There are some data suggesting the role of antidepressants in the development of RLS among adults.^[3] However, there is only one report on the development of increased myoclonic leg movement among pediatric patients in the context of treatment with fluoxetine.^[4] We present a compelling case of RLS that developed in the context of treatment with sertraline in a child with Crohn's disease. The patient assented to the proposed case report and the mother provided an informed consent.

CASE PRESENTATION

A 9-year-old male with a history of attention deficit hyperactivity disorder (ADHD), generalized anxiety disorder, and Crohn's disease was stable on guanfacine extended-release tablet 2 mg (for ADHD) and sertraline (for anxiety). We had put him on sertraline 6 months ago and had titrated the dose to 37.5 mg about 2.5 months before writing this report. Sertraline helped significantly with the anxiety symptoms but the patient started experiencing uneasiness in his legs within 3 weeks of the increase in its dose. The patient described that his feet "will not stop moving" at night causing initial insomnia. He also described a "crawling," "tingling," and dull aching "pain" all over his legs, especially around feet and ankle, at night. The symptoms disappeared during the day when he is active. He was offered massages, warm compression, and hot bath without much improvement in the symptoms. There were no symptoms of jerky movement of the extremities while sleeping or acute sharp pain in a single group of muscles. The patient did not experience any fever, rash or blood loss and also denied any family history of RLS.

A thorough physical examination conducted by the medical team revealed no abnormalities and there was no swelling, gloves and stock distribution of sensation, or any other local site pathology. Blood work revealed a red blood corpuscle count of

4.62 (range 3.98–5.19 M/mcL), hemoglobin 12.3 (11.2–14.4 g/dL), hematocrit 37.4 (34.0–43.4), mean corpuscular volume 81.0 (range- 78.0–90.0 fL), mean cell hemoglobin 26.6 (25.6–30.2 pg), mean corpuscular hemoglobin concentration 32.9 (31.0–35.0 g/dL), platelets 203 (140–400 K/mcL), mean platelet volume 9.3 (9.0–12.6 fL), C-reactive protein 3.5 (\leq 1.0 mg/dL), erythrocyte sedimentation rate 24 (0–10 mm/h), ferritin 8 (7.0–140.0 ng/mL), gamma-glutamyl transferase 15 (9–64 IU/L), zinc 67 (48–129 mcg/dL), vitamin D 36 (30–100 ng/mL) vitamin B12 904 (180–914 pg/mL), folate 24.8 ($>$ 5.9 ng/mL), iron 44 (62–196 mcg/dL), iron saturation 10 (15–58%), blood urea nitrogen 10 (9–22 mg/dL), and creatinine 0.48 (0.70–1.30 mg/dL).

We applied Naranjo Algorithm- Adverse Drug Reaction (ADR) probability scale, and the score was 8, indicating the likelihood of a probable association^[5] of sertraline and the reported symptoms. We diagnosed him with RLS in consultation with his pediatrician. We did not use any rating scales to measure the symptoms. Although RLS is often associated with low iron or ferritin levels, we chose to taper off sertraline because of the temporal relationship between the dose increase of sertraline and the development of the symptoms. The patient started experiencing remission of the symptoms within 2–3 days of lowering the dose of sertraline, and within 7–10 days of discontinuation of sertraline, the symptoms disappeared completely. Although the patient's low serum iron and ferritin levels can be associated with RLS, the symptoms disappeared without any iron supplement, which indicates a possible association of sertraline with the RLS in this case. We wished to further establish the role of sertraline in the development of such symptoms by re-challenging the patient with sertraline but the patient's mother did not provide consent.

DISCUSSION

To our knowledge, this is the first reported case of the development of RLS in a pediatric patient that seems to be associated with treatment with sertraline. Here, RLS developed at a young age, and there was no family history of RLS. The patient had low iron and low normal ferritin levels, which could be related to the development of RLS in this case.

We considered several differential diagnoses. We excluded growing pain because the pain was partially relieved by movement. Venous disorders were not responsible for the presentation because a circadian pattern was present, and there was no venous engorgement or skin alteration at the local site. We excluded akathisia because of the lack of subjective sense of restlessness or inability to sit still and the lack of symptoms during the day. Although we considered polyneuropathy, there was no associated paresthesia or sensitivity to touch, and there was the presence of motor restlessness. The patient did not experience any twitching or jerky movement of the extremities while asleep that is found in periodic limb movement disorder (PLMD). We also considered nocturnal leg cramp but we excluded it because of the bilateral presentation and lack of severe pain and as there was no single group of muscles involved. Crohn's disease can also be associated with RLS but usually, the comorbidity occurs among older patients.^[6] In our case, there was no exacerbation of Crohn's disease at the time of appearance of RLS symptoms and neither did the patient require any additional intervention for Crohn's disease symptoms. Although there are some reports of RLS in association with selective serotonin reuptake inhibitor (SSRI) medications, it is unclear whether all antidepressants carry the same risk of RLS.^[3] In a qualitative review of medication-induced RLS, escitalopram and fluoxetine were found to have the most substantial evidence for SSRI-induced RLS.^[7] There is one study among adult patients,^[8] where the incidence of RLS among sertraline treated patients was documented as only 0.9%. However, there was no reported data on pediatric patients.

Although this case report lacks the strength of a definitive causal association of sertraline with RLS, it aims at raising awareness among clinicians about the possible influence of sertraline in the development of such symptoms in pediatric patients.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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