Multiple Skeletal Injuries Resulting From Uncontrolled Restless Legs Syndrome

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Abstract: Restless legs syndrome is a common condition that results in difficulties falling and staying asleep and perception of poor sleep quality. We report a case of a 73-year-old woman with uncontrolled restless legs syndrome who spent most of the night standing and walking. As a result of her nighttime behaviors, she fell several times and sustained, on several separate occasions, fractures of both forearms, ribs, and nose. We present a case of a woman with restless legs syndrome whose poorly controlled symptoms led to multiple skeletal fractures.

REPORT OF CASE

A 73-year-old woman was evaluated at the Sleep Disorders Center for restless legs syndrome. Her symptoms had started in her teenage years, and she had been previously treated with carbidopa/levodopa, pergolide, and gabapentin. Four years prior to current presentation, therapy with pramipexole was started. Pramipexole initially controlled the symptoms, but eventually augmentation and rebound developed, prompting an increase in dose to 1.5 mg 4 times a day. Her symptoms did not respond to this therapy, and the patient was referred for further management.

For 6 months preceding this presentation, the patient woke up daily after only 1 to 2 hours of sleep due to leg discomfort and spent most of the night walking. She also frequently stood leaning against the kitchen table. She regularly fell asleep while standing. On 3 separate occasions, she fell and sustained skeletal fractures; she broke both her wrists, her nose, and ribs.

The patient had a history of medication-controlled hypertension, hypothyroidism, depression, and moderate obstructive sleep apnea (apnea-hypopnea index of 19/hour), for which she was prescribed continuous positive airway pressure. She stopped using CPAP several months prior to this presentation because she spent very little time in bed. In addition to pramipexole, she was taking spironolactone, hydrochlorothiazide/triamterene, rabeprazole, duloxetine, levothyr oxine, and risendronate.

Physical examination revealed an obese elderly woman (body mass index of 35.5 kg/m²) who was kyphotic. Her right wrist was in a cast. Her oropharynx was slightly narrowed in lateral dimension. The remainder of the physical examination was normal. Complete blood count and basic chemistry panels, including electrolytes were normal. Blood ferritin concentration was 31 µg/L. Electrocardiogram showed normal sinus rhythm with normal P-R and Q-T intervals.

Iron replacement therapy was prescribed, using ferrous fumarate/ascorbic acid. Pramipexole was discontinued, and ropinirole was introduced at the dose of 1 mg at noon and in the evening, with possible increase of the total daily dose up to 6 mg. Six months after presentation, the patient had only minimal symptoms that did not disturb her sleep. She took ropinirole 2 mg in the morning and pramipexole 1-2 mg at night and continued to take duloxetine. She spent the nights in bed, was able to restart CPAP therapy, and had no further injuries.

DISCUSSION

Symptoms that bring patients with RLS to medical attention include difficulty falling asleep and staying asleep and a perception of poor quality of sleep. Despite subjective and objective sleep deprivation, excessive daytime sleepiness is rarely a presenting complaint. Relief of symptoms by movement is one of the criteria that define RLS. Patients with RLS frequently “stretch,” move their legs, or walk. Our patient’s symptoms were so severe that she was practically unable to lie down at night, moved and walked constantly, slept in a standing position, and fell a number of times. Augmentation from her dopaminergic therapy and possibly low iron stores contributed to the severity of the patient’s RLS symptoms. Iron replacement and dopamine-agonist therapy at doses lower than those prior to evaluation resulted in an excel-
Falling and skeletal fractures are, to our knowledge, previously unreported complications of RLS. Several possible mechanisms may have accounted for this unusual presentation. The patient’s inability to lie down, combined with an accumulated sleep deficit, forced her to sleep in the standing position, which in turn put her at risk of falls. Patients with RLS suffer from cognitive impairment, which is most likely due to sleep deprivation; such patients may no longer be able to recognize their degree of sleepiness. High-dose pramipexole, ropinirole, and duloxetine may all cause dizziness. Of note, despite repeated fractures, the role of RLS and the patient’s unusual sleep habits had not been explored by her physicians prior to presentation.

REFERENCES