

A Case of Compulsive Behaviors Observed in a Restless Legs Syndrome Patient Treated with a Dopamine Agonist

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DOPAMINE AGONISTS, ROPINIROLE AND PRAMIPEXOLE, ARE THE ONLY FDA-APPROVED RESTLESS LEGS SYNDROME (RLS) THERAPIES. AS SUCH, THESE TWO dopamine agonists are considered the first line of treatment (generally at low doses) for RLS in current evidenced-based guidelines.¹ Dopamine agonists have long been used at higher doses to treat Parkinson disease (PD), and compulsive behaviors are well known to be associated with dopamine agonist use at these levels.² In a small number of case reports, however, gambling has been observed in individuals with RLS who were treated on a low dose of dopamine agonists.³⁻⁵ In addition, Ondo and Lai⁶ reported that of 89 RLS patients treated with dopamine agonists, 7 manifested compulsive shopping behaviors and 2 manifested gambling, though none were reported to manifest the compulsive eating reported in some PD cases. The authors noted that a failure to identify similar compulsive behavioral patterns among RLS and PD patients likely related more to the higher dopamine agonist treatment range in PD rather than to specific neurobiological etiologies underlying the two disorders. Thus, Ondo and Lai speculated that the potential for RLS patients to develop compulsive behaviors may be less noticeable given the smaller doses of dopamine agonists used to treat those patients.⁶

Here, we describe a case of a 66-year-old woman with RLS diagnosed 14 years previously. She had been treated with levodopa, ropinirole, and pergolide at various times during the course of her RLS, without improvement in her symptoms. For 7 years she was successfully managed solely on pramipexole at a maximum dose of 0.25 mg daily, but eventually the patient's symptoms grew more intense and began occurring earlier in the day. Her neurologist recommended she increase the pramipexole dose to 1.0 mg daily. After she had been on this dosage for one year without much improvement, she was referred to the RLS specialty team at our center for a second opinion.

After a thorough history and physical exam, it was concluded that this patient's worsening symptoms were due to either disease progression or more likely, drug-induced augmentation.⁷ Due to strong suspicion of the latter, gabapentin was started with the goal of weaning off pramipexole. A few weeks later, she sent a letter describing the "change in her habits" that only became

apparent after tapering the pramipexole (see excerpt). She also reported a conscious compulsion for nocturnal eating leading to a 9-pound weight gain while on pramipexole with a documented weight loss after stopping it. Interestingly, when initially seen in clinic, this patient did not report any compulsive behaviors despite being directly questioned about them. At a follow-up clinic visit, she reported feeling like her "normal self" and her husband stated he "has his old wife back after 7 years."

DISCUSSION

Symptoms such as compulsive behaviors are evident in people with attention deficit hyperactivity disorder, which has been linked with RLS.⁸ Yet, in this report we describe a patient with RLS with no premorbid history of attention deficit disorder or compulsive behaviors, who began to demonstrate such behaviors only in relation to dopamine agonist administration. This case also highlights the lack of patient insight into her behaviors; she only became aware of her compulsive eating and shopping after she stopped the pramipexole. Furthermore, the pramipexole dose had been relatively low (0.25 mg per day) when the compulsive shopping began, a behavior that could be corroborated by the patient's credit card records and her husband's account of past events.

With a low dose of dopamine agonist, our patient's compulsive behaviors, evident only in hindsight, were not as dramatic as the reports of excessive gambling or sexual urges reported for some patients with PD taking high doses of dopamine agonists. It would not be unusual, therefore, for subtle compulsive behaviors, such as those described in this case, to go undetected initially. Even the stronger compulsive behaviors of patients with PD taking dopamine agonists are not generally seen as a problem until the consequences, such as a major loss of money, call attention to the behaviors.²

The descriptions of compulsive behaviors in the PD population have led some investigators to speculate whether the behaviors result from the neurodegenerative process of PD or represent a specific effect of dopamine agonists. Demonstration of such behavior in non-PD cases and at lower doses of dopamine agonist administration suggests that subtle compulsive behaviors may be more prevalent than previously recognized by patients and treating providers. This phenomenon, which has now been reported in the RLS population, may provide additional insight into the underlying etiology of compulsive behaviors and suggest a larger neuropharmacological role played by dopamine agonists.

While most neurologists may be familiar with RLS augmentation and simple progression of the disease, many may not be

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aware of the aberrant behaviors that may arise in the process of treating this condition with dopamine agonists. It might be worth considering use of compulsive behavior scales during dopamine agonist treatment for RLS patients to bring attention to and further understanding of the prevalence and degree of this problem within the RLS population.

Excerpt

“I heard an ad for Mirapex on TV and the word ‘compulsive’ was mentioned. Let me tell you about my problem and PLEASE keep this confidential. My husband does not know this. In the past few years I have been shopping compulsively and have now run my credit card debt up to over \$40,000. Just recently, I have sat back and tried to examine why this happened. I never used to be this way. Since I started the new regimen with Neurontin I have also noticed that my behavior is not so compulsive and I am not reckless with my spending. In fact, I no longer have an interest in shopping.”

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