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SLEEP MEDICINE PEARLS

Patient With a New Parasomnia

Surina Sharma, MD[1]; Susheela Hadigal, MD[1]; Mary H. Wagner, MD[2]; Scott Ryals, MD[1]; Richard B. Berry, MD[1]

[1]Division of Pulmonary, Critical Care and Sleep Medicine, University of Florida, Gainesville, Florida; [2]Division of Pulmonary and Sleep Medicine, Department of Pediatrics, University of Florida, Gainesville, Florida

A 60-year-old male with obstructive sleep apnea (OSA), hypertension, end stage renal disease on peritoneal dialysis and restless legs syndrome (RLS) comes to the office for a follow-up. His RLS symptoms have been well controlled on gabapentin 200 mg and pramipexole 0.375 mg. His pramipexole was started by his nephrologist for RLS and the dose was increased from 0.25 mg to 0.375 mg for residual RLS symptoms. Approximately one month after the increase, he began sleepwalking confirmed by his wife. During sleepwalking in the middle of the night, he left the bed and engaged in various activities including turning on the gas stove to heat an empty frying pan. There was no evidence of food ingestion during these episodes. Other medications include trazodone, losartan, simvastatin, carvedilol and furosemide, all of which were unchanged from previous visits. He had no previous history of sleepwalking or parasomnias. His OSA has been well-treated with excellent adherence to positive airway pressure, and a residual apnea-hypopnea index of 0.5. He has had no periods of new stress, sleep deprivation or changes to his sleep schedule.

QUESTION: What caused the patient to develop a new parasomnia?

ANSWER: Pramipexole is the likely cause of the patient's sleepwalking.

DISCUSSION

Pramipexole is a non-ergoline dopamine agonist, which has full affinity for D3 receptors,[1] and has been found to be effective in both RLS and periodic limb movement disorder. It is common for pramipexole users in the early phases of the treatment to have disrupted and interrupted sleep.[1] Sleep disturbances may include insomnia (onset or maintenance), frequent awakenings throughout the night, and strange dreams.[1,2] This is likely due to dopaminergic alterations in the brain induced by pramipexole which cause neural activation altering the circadian rhythm resulting in sleep disturbances.[2] As described by Eckeli et al, in 2011, there also have been cases where patients with Parkinson disease on pramipexole were found to have sleep-related eating disorder (SRED).[3] SRED has been associated with sleepwalking, RLS, periodic limb movement disorder, OSA and with the use of various medications such as antidepressants, lithium, olanzapine, risperidone, and zolpidem.[4] Although no direct relationship between non-rapid eye movement (NREM) parasomnias and pramipexole has been studied in detail, cessation of SRED symptoms after reduction of the pramipexole dosage in previous cases suggests that pramipexole can trigger the onset of SRED.[3,4] Thus, it can potentially be a trigger for other NREM parasomnias—like sleepwalking in this case.

Pramipexole has a half-life of 8–10 hours and is mainly eliminated renally; therefore a dose adjustment is needed for patients with renal impairment.[5,6] Limited data is available on dopamine agonists, their effectiveness and safety profile in patients on maintenance dialysis. Most studies involving pramipexole have enrolled patients with no renal impairment.[6] We found only one study that examined pramipexole in uremic patients—these patients showed significant relief of RLS symptoms, but no change in sleep architecture, sleep latency, awakenings at night, or total number of hours slept.[6] Pramipexole is typically started at 0.125 mg once a day and can be increased by 0.125 mg every 2–3 days until relief is obtained. The clinician should ensure that the dose is taken 1–2 hours before bedtime. The daily dose should not be increased to more than 0.75 mg in patients with end stage renal disease, although this has not been extensively studied.[6] On prescribing pramipexole kidney function of patients should be investigated and after initiation of this medication, patients should be questioned specifically about the emergence of parasomnias like sleepwalking, sleep eating, REM sleep behavior disorder, and vivid/bizarre dreams. If the patient reports parasomnias, a dose reduction or cessation of pramipexole should be considered. In our patient, the dose of pramipexole was decreased to 0.25 mg followed by 0.125 mg with resolution of his sleepwalking.

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1. Pramipexole has been associated with sleepwalking, sleep attacks, sleep eating and other parasomnias.[3]
2. After initiation of pramipexole, patients should be specifically asked about sleepwalking, REM sleep behavior disorder, sleep attacks, sleep-related eating disorder.
3. An increase in the frequency of sleepwalking has been seen when pramipexole is co-administered zolpidem, selective serotonin reuptake inhibitors/serotonin norepinephrine reuptake inhibitors, and lithium.[3,4]
4. Pramipexole is renally excreted and should be used with caution in patients with chronic kidney disease.[6]
5. The maximum recommended daily dose of pramipexole in patients on dialysis is 0.75 mg, however patients on hemodialysis can experience side effects at lower doses than 0.75 mg.[6]

CITATION

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Address correspondence to: Surina Sharma, MD, 1600 SW Archer Rd, Gainesville, FL 32610; Email: Surinasharma77@gmail.com

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