

SLEEP MEDICINE PEARLS

Good Night, Sleep Tight, Bed Bugs Continue to Bite

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A 6-year-old male presents to a sleep clinic for evaluation of abnormal movements during sleep. These movements have persisted unchanged since he was age 1 year. As soon as he falls sleep, he bangs his head repetitively on the pillow or rolls his head side to side all night until the morning. Intermittently, he rhythmically bangs his legs. This occurs on a nightly basis in the prone position. Examples of these movements can be seen in **Video 1** and **Video 2**. If his mother rubs his back, he stops transiently and then resumes. He does not snore. He reports an uncomfortable sensation in his legs and an urge to move his legs in the evening that worsens prior to falling sleep. Walking

attenuates the urge. The patient sleeps through the night from 8:00 PM to 6:00 AM. He has a history of mild language delay that has resolved and he is developing normally. He has no abnormal movements during the day. Family history is negative for head banging, seizures, and restless legs syndrome.

QUESTION: Based on the information given and the movements captured in Video 1 and Video 2, what is your diagnosis?

ANSWER: Sleep-related rhythmic movement disorder**Case Resolution**

The parents were reassured about the benign nature of these movements. The patient also met criteria for restless legs syndrome. Overnight polysomnography with extended electroencephalogram montage was normal. No movements were recorded in the sleep laboratory because he slept in the supine position. Serum ferritin was 36. Iron therapy made no difference. Clonazepam led to paradoxical hyperactivity.

These movements continued unchanged until the patient reached age 8 years. Because he showed increasing attention deficit issues in school and persistent symptoms of sleep-related rhythmic movement disorder (RMD), gabapentin was started at 50 mg at night with gradual titration up to 200 mg. Currently, nighttime movements are resolved except for a few minutes before awakening. His urge to move his legs has disappeared. Daytime behaviors and focus in school and at home have remarkably improved.

DISCUSSION

RMD is characterized by repetitive, stereotyped, and rhythmic motor behavior, that occur during drowsiness or sleep and involve large muscle groups. Subtypes of movements include body rocking, head banging, head rolling, and less commonly body rolling, leg rolling, or leg banging. Head banging often occurs with the person prone. At age 9 months, 59% of all infants have one or more sleep-related rhythmic movements. Overall prevalence declines to about 5% at age 5 years. Sleep-related rhythmic movements are common in healthy infants and children. In some children, stereotypic movements may be associated with intellectual disability or autism spectrum disorder, but they are not predominantly sleep related.¹

RMD is more common in males.² RMD have been reported in association with restless legs syndrome.³ Vitello et al. reported RMD in a patient with restless legs syndrome that improved with dopamine agonist therapy.⁴ This could possibly represent overlap syndrome because both symptoms in our patient improved with gabapentin. Other associations include sleep apnea, narcolepsy, and attention deficit/hyperactivity disorder.⁵ Rhythmic movements in sleep and drowsiness can only be considered a disorder if associated sleep disruption impairs daytime function or results in injury.

The mechanisms underlying the genesis of these movements is not fully understood. The role of inhibitory control on the central motor pattern generator has been suggested as a possible mechanism.⁶

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1. Sleep-related rhythmic movements are common in healthy infants and children.
2. Most children outgrow the movements without intervention; however, these movements persist in some children until adulthood.
3. Prone positional component has been reported with head banging.
4. Without evidence of significant consequences, the movements alone should not be considered a disorder. When RMD is associated with significant daytime impairment, treatment should be considered. Our patient in addition had symptoms of restless legs syndrome and responded well to nighttime gabapentin therapy.

CITATION

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DISCLOSURE STATEMENT

This case was seen and evaluated at Boston Medical Center. Both authors have seen and approved the manuscript. The authors report no conflicts of interest.