

Rockin' Yourself Asleep

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Abstract

Background: Sleep-related rhythmic movement disorder occurs frequently in childhood with a minority of patients having persistent symptoms in adolescence.

Phenomenology Shown: We describe a 14-year-old female showing a typical example of head banging at onset of sleep.

Educational Value: Sleep-related rhythmic movement disorder usually has a benign and self-limiting nature and medication might only be warranted in cases of severe sleep disruption or frequent injuries.

Keywords: Sleep disorders, sleep-related rhythmic movement disorder, headbanging, polysomnography

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Ethics Statement: This study was performed in accordance with the ethical standards detailed in the Declaration of Helsinki. All patients that appear on video have provided written informed consent; authorization for the videotaping and for publication of the videotape was provided.

We present a healthy 14-year-old normally developed female with no known medical or psychiatric history, suffering from abnormal head movements during her sleep. The symptoms started 10 years ago and have been occurring several times a week since then. As a consequence, she has suffered from excessive daytime sleepiness (Epworth Sleeping Scale score, 16; normal <10).

The results of the clinical neurological examination were normal. She underwent a polysomnography (Video 1, Figure 1) that showed three episodes (1–8 minutes) of rhythmic head flexion and extension, suggestive of “head banging”, during onset of sleep and non-Rapid Eye Movement sleep (Stages 1 and 2). Furthermore, the polysomnography showed an increased arousal index (13 per hour, normal <10 per hour) without any pathological epileptic, respiratory, or periodic limb movement events.

On the basis of a typical history and semiology, the patient was diagnosed with sleep-related rhythmic movement disorder (SRMD). She was informed about SRMD and different treatment options, but preferred no treatment.

SRMD is defined as a group of stereotypic, repetitive, and rhythmic movements of large muscle groups within 0.5–2 Hz, resulting in head banging (Video 1), body rocking, or head rolling.¹ SRMD typically

starts at young age and the movements usually appear while falling asleep. They can, however, occur during all stages of sleep and may last from several minutes to even a few hours. A detailed parent report and polysomnography can help to differentiate SRMD from other sleep-related movement disorders, nocturnal epilepsy, parasomnias, and motor stereotypies in neurodevelopmental disabilities.



Video 1. Video-polysomnography. Examination shows a classical example of head banging. Our patient is in prone position and shows rhythmic head flexion and extension, starting after non-Rapid Eye Movement sleep.

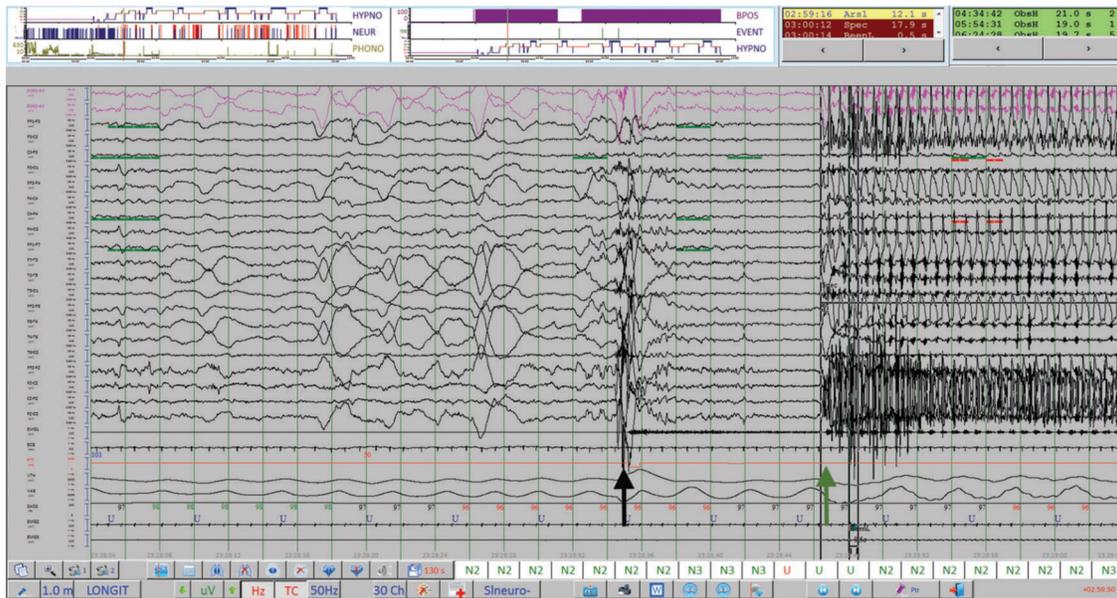


Figure 1. Polysomnographic findings during Video 1. This 1-minute polysomnographic epoch (150 mV) with electroencephalography (EEG) and mentalis muscle electromyography (EMG) recordings shows non-Rapid Eye Movement sleep interrupted by an arousal (black arrow), after which the patient starts headbanging (green arrow). The rhythmic movement artifacts on the EEG and EMG channels are typical for sleep-related rhythmic movement disorder.

Sleep-related rhythmic movements occur frequently in infants and are only regarded as a disorder when causing injuries or interfering with sleep quality,¹ which may result in increased daytime sleepiness.² The association with developmental disorders, psychological distress, and other sleep disorders has been described, but this has not been shown universally.³ Most children with SRMD show no comorbidities. SRMD normally stops during childhood (<5 years) with only a minority of patients suffering from persistent symptoms into adolescence.³

Currently, there are no evidence-based therapy guidelines. Behavioral approaches have shown inconsistent results.³ Several case studies have reported an effect of benzodiazepines and two cases were successfully treated with haloperidol and imipramine.³ Medication, however, might only be warranted in cases of severe sleep disruption or

frequent injuries. It is important to explain the disorder's benign and self-limiting nature and to create a safe environment, preventing the patient from harming him/herself.³

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