

## Medical Image of the Week: REM Sleep Behavior Disorder in Parkinson Disease

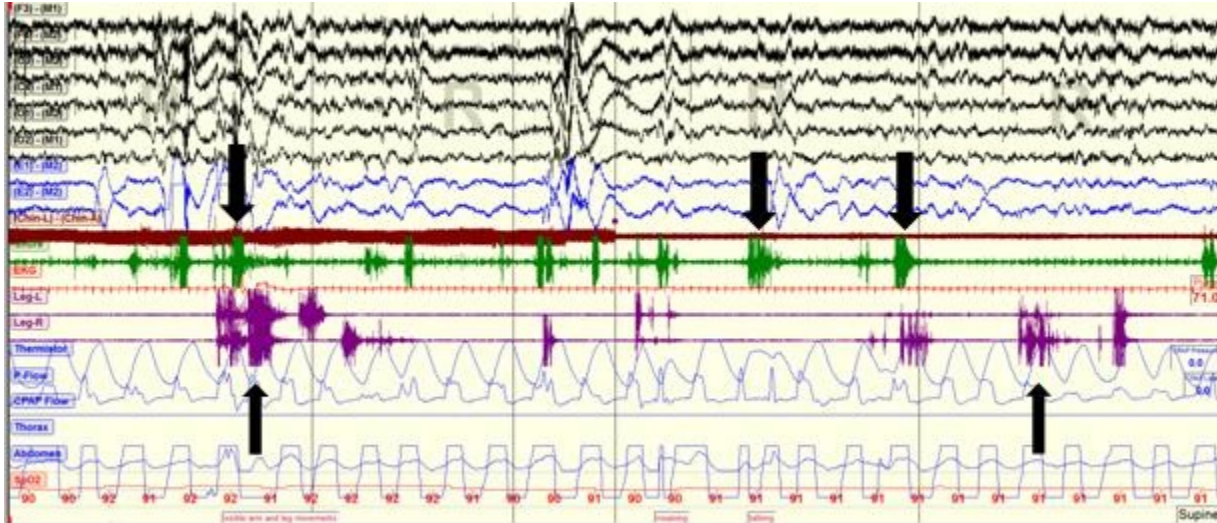


Figure 1. 120 second polysomnogram window showing phasic REM sleep without atonia. Arm and leg movements were seen (black up arrows) and patient was heard moaning and speaking out (black down arrows).

A 55 year old female with a past medical history significant for Parkinson disease status-post implantation of bilateral deep brain stimulators, depression, and restless legs syndrome, who initially presented to the sleep clinic on referral by neurology for evaluation of disordered sleep. Medications included carbidopa-levodopa, escitalopram, gabapentin, lorazepam, ambien, and pramipexole. Her subjective sleep complaints included snoring, restless sleep, difficulty in maintaining sleep, sleep related anxiety, dream enactment behavior, nightmares, and sleep talking. She was sent to the sleep laboratory for evaluation of suspected rapid eye movement behavior disorder (RBD). Overnight polysomnogram did not show evidence for sleep disordered breathing. The sleep study was notable for rapid eye movement (REM) sleep without atonia, visible arm and leg movements, and audible moaning, speaking, and crying out. These findings corroborated the subjective complaints expressed by the patient and her husband. Her medication regimen was altered. Zolpidem and lorazepam were discontinued and she was started on clonazepam. On follow up three months later she reported significant improvement in symptoms and quality of life. She reported near resolution of dream enactment behavior and reduction in restlessness as reported by her husband.

RBD is a sleep disorder characterized by vigorous motor activity that occurs during REM sleep. There is an abnormal loss of normal muscle atonia that usually occurs during REM sleep. REM behavior disorder is commonly seen in individuals with synucleopathies such as Parkinson disease. Lesions within pontomedullary structures are suggested to be the cause of dysfunction of motor control during sleep. REM sleep behavior disorder may actually precede symptoms of parkinsonism by decades, portending the development of overt Parkinson disease in the future (1).

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***Reference***

1. Boeve BF. Idiopathic REM sleep behaviour disorder in the development of Parkinson's disease. *Lancet Neurol.* 2013 May;12(5):469-82. [\[CrossRef\]](#) [\[PubMed\]](#)