

Diagnosis and Differential Diagnosis

The main differential diagnosis is nocturnal seizure, which occasionally requires epilepsy monitoring (video electroencephalogram) if the episodes are frequent. For episodic symptoms, the use of home video (by cell phone) is more reliable than description by witnesses. Nocturnal seizures tend to be more stereotyped than parasomnias, and they often include tonic or clonic motor activity.

Treatment and Prognosis

Reassurance and measures to avoid injuries usually are sufficient. For episodes with injurious behaviors, low-dose benzodiazepines (clonazepam, 0.5 to 1 mg) are often effective. Prognosis is good, and most patients do not require treatment.

Rapid Eye Movement Behavior Disorder

Definition and Epidemiology

REM behavior disorder (RBD) is a disorder of REM sleep regulation in which there is a dissociation of REM features with loss of the muscle atonia, leading to patients acting out their dreams. RBD typically affects patients after the age of 50 (usually older) and the male-to-female ratio is 10 : 1.

Pathophysiology

REM inhibition is lost due to bilateral degeneration of REM atonic neurons in the pons. RBD occurs with α -synucleinopathies (i.e., Parkinson's disease, multiple system atrophy, and dementia with Lewy bodies), and RBD typically heralds these neurodegenerative diseases, sometimes by 10 to 15 years.

Clinical Manifestations

Typically, the episodes are reported by the bed partner and consist of high-amplitude, flailing, injurious behaviors during


sleep. When awakened, the patient typically recalls the dream. As is typical of REM arousals, the patient is alert and coherent immediately (unlike slow-wave sleep arousal). Medications, especially psychotropics, can exacerbate RBD.

Diagnosis and Differential Diagnosis

The diagnosis can usually be made by the history alone, and PSG is not needed. When performed, PSG shows a lack of REM atonia or increased phasic and tonic REM. Like slow-wave parasomnias, the main differential diagnosis is nocturnal seizure, and this occasionally requires epilepsy monitoring. Home video (cell phones) recordings can be useful.

Treatment and Prognosis

Low-dose clonazepam (0.5 to 2 mg) is usually effective. Symptoms initially respond to treatment, but a neurodegenerative disease is likely to become evident.

 For a deeper discussion of these topics, please see Chapter 100, "Obstructive Sleep Apnea," and Chapter 405, "Disorders of Sleep," in Goldman-Cecil Medicine, 25th Edition.

SUGGESTED READINGS

- Buyssse DJ: Insomnia, *JAMA* 309:706–716, 2013.
- Ebisawa T: Analysis of the molecular pathophysiology of sleep disorders relevant to a disturbed biological clock, *Mol Genet Genomics* 288:185–193, 2013.
- Faraut B, Boudjeltia KZ, Vanhamme L, et al: Immune, inflammatory and cardiovascular consequences of sleep restriction and recovery, *Sleep Med Rev* 16:137–149, 2012.
- Mignot EJ: A practical guide to the therapy of narcolepsy and hypersomnia syndromes, *Neurother* 9:739–752, 2012.
- Ohayon MM: From wakefulness to excessive sleepiness: what we know and still need to know, *Sleep Med Rev* 12:129–141, 2008.