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BOARD REVIEW CORNER

Frightening Spells at Night

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A 36-year-old male presented for evaluation of bothersome nighttime awakenings since age 18. The patient describes episodes of "waking up suddenly with a concern of a noise in the house, or intruder," associated with a "sense of choking." Sometimes he feels that he is in a falling elevator, another treacherous environment, or threatening situation where he "loses control." These events are temporally associated with episodes of racing heart rate, chest discomfort, and a sense of impending doom. He has full memory of these events and is generally able to fall asleep shortly after awakening. The frequency of the episodes is once per night when sleeping at home, occurring mostly during the second part of the night. The events will increase to as many as 3–4 times a night if he sleeps away from home. He also has had more recent issues with insomnia after he heard that symptoms similar to this can be related to a neurodegenerative disease.

A questionnaire completed by his bed partner noted nightly awakenings 45 minutes after falling asleep with intense anxiety/dread, often with voiced concerns that he is choking or that there is an intruder in the house. The patient has no significant past medical history.

The patient's medications include alprazolam for sleep, used as needed. The use of this medication seems to lessen the likelihood of his nocturnal events. Additional factors which reduce the severity/frequency of the episodes include the presence of his wife and family at home, incorporation of relaxation techniques, medication, and completing all work duties by 8 P.M. His mother had similar symptoms during adulthood, and has a concomitant diagnosis of anxiety.

His neurological exam is normal. He had a Mallampati class II airway and a neck circumference of 15.5 inches.

His Epworth Sleepiness Scale score was 14/24 and Patient Health Questionnaire (PHQ-9) score was 5 (indicative of mild depression). Generalized anxiety disorder 7-item scale (GAD-7) score was 11 (indicative of probable anxiety disorder). Polysomnography demonstrated an apnea-hypopneas index of was 2/h. Minimum SpO_2 was 89%. His sleep efficiency was 90%. Baseline SpO_2 was 95–97%. REM sleep latency was 146 minutes. Stages N1, N2, N3, and REM sleep comprised 7, 67, 0, and 26% of sleep, respectively. There was borderline augmentation of EMG tone during REM sleep. He did not have his typical spell during the night.

QUESTION 1
What is the most likely etiology of the spells?

a) Nocturnal panic attacks
b) REM sleep behavioral disorder
c) Sleep terrors
d) Nocturnal frontal lobe epilepsy
e) Nightmare disorder

QUESTION 2
The patient would likely benefit most from which of the following therapies?

a) Clonazepam
b) Levetiracetam
c) Fluoxetine
d) Cognitive behavioral therapy

ANSWER 1
a) Nocturnal panic attacks

ANSWER 2
d) Cognitive behavioral therapy

DISCUSSION

The patient has symptoms that are concerning for a diagnosis of nocturnal panic. Other possibilities include nightmare disorder, sleep terrors, REM sleep behavior disorder (RBD), and nocturnal frontal lobe epilepsy. **Table 1** depicts the common and differentiating features of these disorders based on sleep staging, presence or absence of amnesia, autonomic arousal, dreaming, and responsiveness following the spell.

Nocturnal panic (NP) has been defined as a panic episode that *arises out of the sleep state itself* and should not be confused with a panic episode that emerges *shortly after waking* in response to the content of a nightmare, or regained conscious awareness of a fear-inducing cognition. It can occur in isolation, or with concomitant daytime panic (DP).[1,2] Attacks often occur within the first hours of sleep onset. An estimated 44% to 71% of patients with panic disorder will experience nocturnal symptoms at least once.[3] Patients with NP are considered by some to be a more severe form of panic disorder; however, this has not been substantiated in clinical studies.[4]

Our patient has a number of characteristics commonly found in patients with panic disorder who experience nocturnal symptoms. In a recent study, patients with NP were more likely to be male and have a longer duration of symptoms, similar to our patient.[4] In addition, patients with concomitant depressive symptoms may be more likely to have NP as well as sleep disturbances independent of NP.[2]

Cognitive behavioral therapy (CBT), treatment with selective serotonin reuptake inhibitors (SSRIs), and benzodiazepines during the initial phase of treatment have been shown to be effective in treating patients with NP.[4–6] In this case, the patient was continued on as-needed benzodiazepines and referred for CBT. The patient was treated using some of the standard components of CBT for panic disorder. These components included cognitive restructuring to decrease both generalized anxiety and pre-sleep arousal, and response prevention, a behavioral technique, to reduce the use of safety behaviors.

The application of these cognitive and behavioral techniques was successful in decreasing this patient's overall anxiety and frequency of nocturnal panic episodes. His benzodiazepine use is now limited to times when he needs to travel alone and is reduced in dosage.

ABBREVIATIONS

CBT, cognitive behavioral therapy
DP, daytime panic
GAD-7, generalized anxiety disorder 7-item scale
NP, nocturnal panic
PHQ-9, Patient Health Questionnaire
RBD, REM sleep behavioral disorder
SSRIs, selective serotonin reuptake inhibitors

CITATION

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Table 1

	Signs and Symptoms					
	Amnestic for Event	Autonomic Arousal	Vivid Dreaming	Responsiveness after Attack	Typical Age	Sleep Stage
Sleep terrors	+	+	–	–	Children	N3 > N2
Nocturnal panic	–	+	–	+	Variable- adults	N2, N3
Nightmare	–	–	+	+	Children	REM
Frontal seizure	+/–	+/–	–	–/+	14 ± 10	N1, N2 > N3
REM sleep behavior disorder (RBD)	–/+	–	+	+/–	Older adults (> 65 years of age), men > women	REM

General presentation of sleep terrors, nocturnal panic, nightmare, frontal seizures, and RBD with associated signs and symptoms. (+) Indicates that this feature is present and (–) indicates that this feature is absent. N1, N2, N3, REM: Stage 1, 2, 3, REM sleep, respectively.

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