Obstructive Sleep Apnea Awareness

Case Vignette: OSA and Dreaminess

Presenting Complaints

A 47-year-old Latina woman presented to her primary care physician with a chief complaint of dreaminess during the whole night for the past 2 decades. She has recently relocated from Tampa to Chicago, and this was her first appointment locally.

She said that she has been troubled by dreams characterized by strong negative emotions, sometimes aggressive, which resulted in non-refreshing sleep and waking up in a bad mood. She feels tired in the daytime and was anxious about the poor sleep quality. She reported mild snoring and occasional sleepiness during the day.

Past History

On further questioning, she added that in the last 6 to 7 years, her dreaminess symptoms had worsened gradually, and she began to seek medical assistance from physicians, psychiatrists, and neurologists many times. However, no confirmed diagnosis was made. Some physicians suggested her taking low dose sleeping pills if the symptom really affected her life, but she did not take any drugs in fear of possible side effects. No history of mental disorders or neuropsychiatric disorders such as depression, anxiety, or post-traumatic stress disorder (PTSD). She denied OTC supplements/herbal use, cigarette smoking and recreational drug use.

Physical Exam

At the physical examination, the heart rate was 84 beats per minute, body mass index was 21.23 kg/m^2 and blood pressure was 100/60 mmHg. Pulmonary assessment was normal. Neurological and mental examinations were unremarkable. No special findings were obtained in the routine medical examination or laboratory results.

Testing

Routine lab results were normal.
Because she reported snoring during sleep and daytime sleepiness, the physician asked her to fill out the STOP BANG questionnaire.

[The STOP-Bang questionnaire is a quick and easy screening tool with eight dichotomous (yes/no) items to assist in triaging patients with suspected OSA. It consists of 4 self-reportable (STOP: snoring, tiredness, observed apnea, and high blood pressure) and 4 demographic (Bang:

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body mass index [BMI; calculated as weight in kilograms divided by height in meters squared], age, neck circumference, and gender) items.]

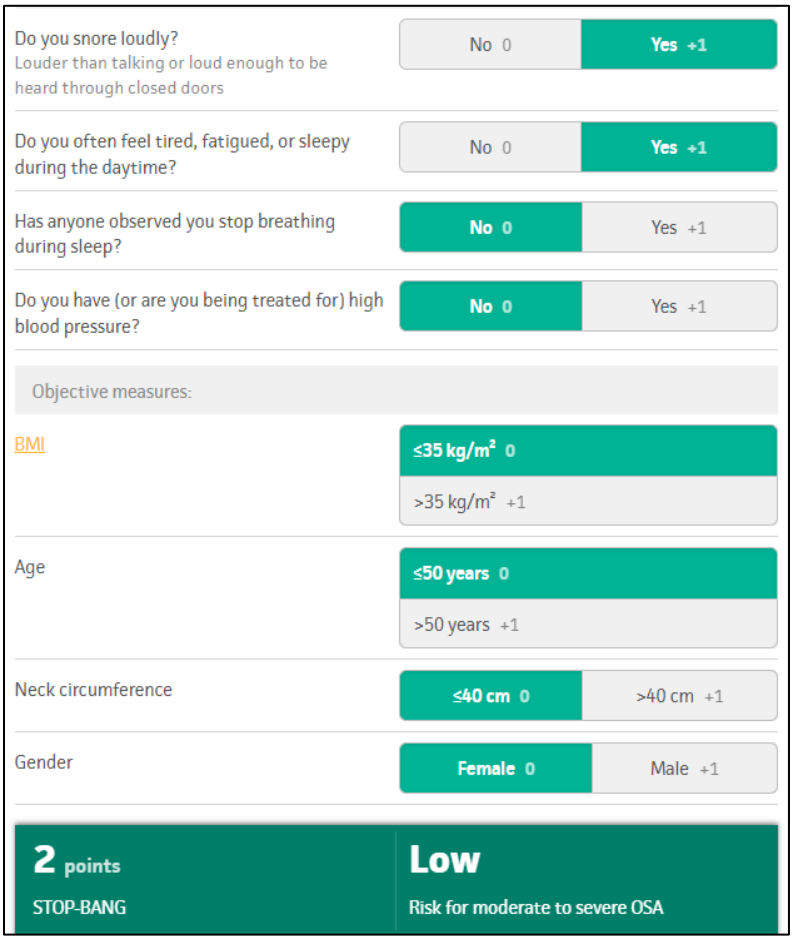

Figure 1. STOP-BANG Score

The patient's STOP-Bang score of 2 (Figure 1) indicated a low risk for OSA. However, given the nuanced interpretation of the questionnaire in women, a lower score could potentially indicate a higher likelihood of severe OSA, warranting further evaluation.[about the STOP-Bang].

To assess the patient's sleepiness, the PCP asked the patient to complete an ESS.

The ESS subjectively assesses excessive daytime sleepiness by asking patients to rate their chance of dozing off from 0 (would never doze) to 3 (high chance of dozing) for 8 commonly encountered scenarios, with a total maximal score of 24.

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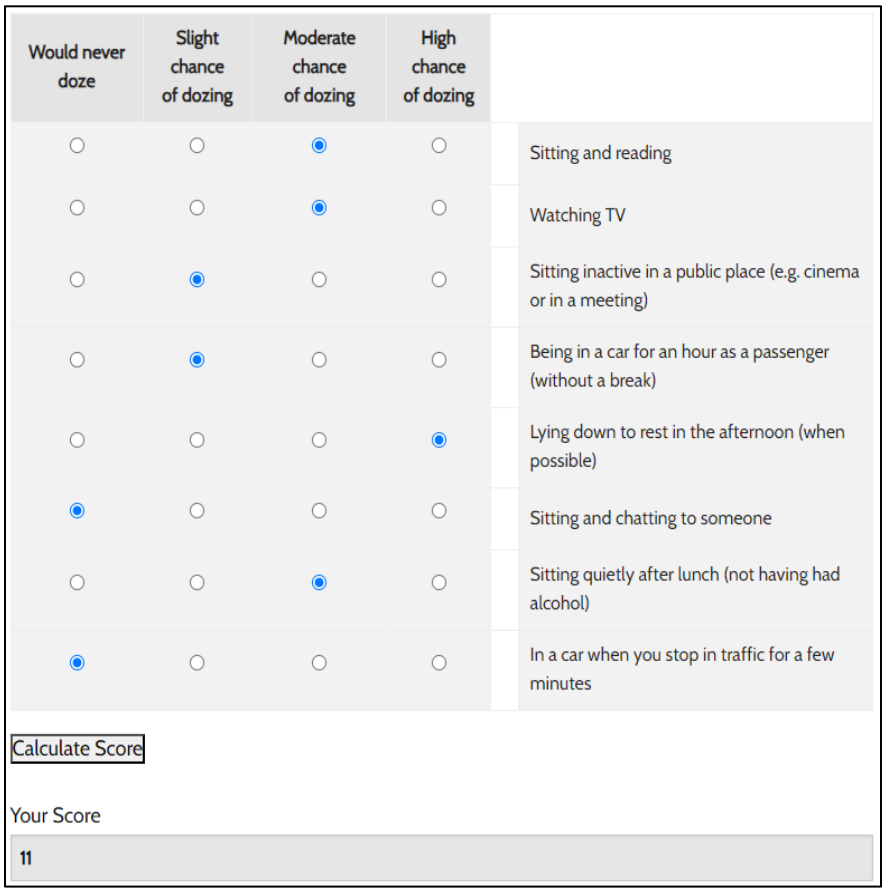

Would never doze	Slight chance of dozing	Moderate chance of dozing	High chance of dozing	
○	○	◉	○	Sitting and reading
○	○	◉	○	Watching TV
○	◉	○	○	Sitting inactive in a public place (e.g. cinema or in a meeting)
○	◉	○	○	Being in a car for an hour as a passenger (without a break)
○	○	○	◉	Lying down to rest in the afternoon (when possible)
◉	○	○	○	Sitting and chatting to someone
○	○	◉	○	Sitting quietly after lunch (not having had alcohol)
◉	○	○	○	In a car when you stop in traffic for a few minutes

Calculate Score

Your Score

11

Figure 2. Epworth Sleepiness Score

The ESS score generated was 11/24 (Figure 2). A score in the range of 11-12 is interpreted as Mild Excessive Daytime Sleepiness. [About the ESS]

The provider suspected obstructive sleep apnea and ordered a polysomnography (PSG). He also wrote a referral for a sleep physician.

Highlights of the PSG examination showed that she had a total sleep time(TST) of 8 hours with apnea-hypopnea index (AHI) of 21.7 events/hour. There were 108 events of obstructive apnea and 106 events of hypopnea. The sleep architecture was discontinuous because of the episodes of apneas and hypopnea. Apnea, hypopneas and fall in oxygen saturation were particularly prominent during REM sleep. The average episode length of REM sleep was 8.65 minutes.

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Discussion of Treatment Plan

Following the sleep physician's appointment and review of the results, the patient was diagnosed with REM related moderate OSA and was scheduled to receive CPAP titration. With a CPAP pressure setting of 8 cm H_2O, she had 7.8 hours of TST and AHI was successfully reduced to 0.5 events/hours. Overnight sleep architecture, particular REM sleep, became much more consolidated and increased to 28 minutes. Moreover, the patient reported that she did not seem to dream all the night and had much better perceived overnight sleep as well as daytime function.

The sleep physician prescribed auto CPAP therapy and asked her to follow up after 2 months.

Outcome of Case

A follow-up CPAP titration after 2 months was similar to the initial CPAP titration night. The sleep architecture had become more stable. OSA and OSA-related REM interruption had almost disappeared. The patient reported that the symptoms of dreaminess were gradually alleviated, and the frequency of dream recall reduced from more than 3 times per night to a few times per month. Moreover, the dream contents were more positive after CPAP treatment. She was satisfied with the sleep quality and felt more energetic and motivated during the daytime.

Teaching Points

Dreaming is a normal activity, which occurs mostly during REM sleep and results in dream recollection. Dreaminess as a nonspecific symptom of poor sleep quality is a common complaint to seek help in a primary care setting.

However, all-night dreaminess is a major problem which results in poor sleep quality and severely affects daytime function, which was similar in this patient who was continually bothered by dreaminess throughout the past 2 decades. REM-OSA is an under-recognized stage-related sleep-disordered breathing in which obstructive respiratory events happen chiefly in stage REM. It occurs frequently, especially in women with OSA in the mild–moderate AHI range and in younger-middle aged patients. They may present with increased dreams, nightmares, mood changes and insomnia. Much of the literature reports that OSA patients have dreams that have negative emotional tone.

This case report highlights that specific REM related OSA could be the main reason for dreaminess symptoms and could be successfully treated by CPAP.

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There are several factors that may influence dreaming in OSA. First, sleep fragmentation and repeated arousals of OSA are associated with high percentages of light sleep which may contribute to the awareness of the dreaming process and increase dream recall. Second, hypoxia and sleep fragmentation may be connected with cognitive dysfunction, which may worsen dream recall.

In clinical practice, physicians generally use pharmacologic therapy featuring hypnotic medication as a common treatment option for dreaminess rather than exploring the possible reason accounting for the symptoms.

Adapted from: Xue P, Zhou J, Lei F, Tan L, Li X, Tang X. Effect of continuous positive airway pressure (CPAP) on mild-moderate obstructive sleep apnea (OSA) related dreaminess: A case report. Medicine (Baltimore). 2020 Mar;99(12):e18949. doi: 10.1097/MD.0000000000018949. PMID: 32195926; PMCID: PMC7220311.

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Additional Reading

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