CLINICAL VIGNETTE

"Doctor, I can't sleep."

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Case Report

A 45-year-old female presented with the chief complaint of insomnia. She denied having difficulty falling asleep at her usual bedtime of 10:30-11:00pm, but she would wake up spontaneously at 2-3 am and remain awake for the rest of the night. She snored lightly but had no snore arousals or observed apneas. She denied twitching of limbs waking her up. She had no cough or dyspnea and no anxiety, panic sensation or palpitations. She is fully alert on arousal. She usually lies quietly in bed and uses the time to plan the following day activities, but more often than not, she would come out of her bed to her sitting room to read until morning when the household rises and the day's activities begin. Her sleep pattern had been present since her 20's. She now seeks medical advice at the insistence of her husband and close friends who were concerned about how little she sleeps. She had tried over the counter sleep aides to increase her sleep time from 4-4 1/2 hours each night to 6 hours without difference in energy level. She has good energy level with excellent efficiency throughout the day. The patient's mind is always active, planning events or working on problems. She has no loss of focus with sedentary activities and denies nodding off in the afternoons. She is unable to take naps during the day even if she wanted to. She exercises 1-2 hours every morning. With dinner, she often drinks 2 glasses of wine at 6 pm. She did not notice any change in her sleep pattern associated with alcohol use. She has no history of head trauma or central nervous system infections. Her mother also wakes up very early in the morning. Her thyroid function is normal. She also has no history of bipolar disorder or mania.

Overnight polysomnography was performed to rule out presence of parasomnias as well as sleep related breathing disorders interrupting sleep. It was normal with slightly decreased sleep efficiency at 88% and total sleep time of 5 hours. Her sleep stage progression and percentages were normal.

Discussion

The patient presented with a classic case of short sleeper syndrome, also known as "healthy" hyposomnia. It is defined by the ICSD (The International Classification of Sleep Disorders) manual as "an individual who habitually sleeps substantially less during a 24 hr period than is expected for a person in his or her age group" despite ample opportunity to do so. Shortened sleep time is defined as total sleep duration less than 75% of regular sleep quantity for age. Mild short sleeper is rated by sleep time less than 6 hours but more than 4 hours in 24 hours. Moderate short sleeper has sleep time between 3-4 hours. If the sleep time is less than 3 hours in 24 hours, it is graded as severe. Onset of symptoms usually start in the late teens or early 20's and persist through life[1]. Frequently, there are other family members with similar tendencies, as with our patient whose mother also does not sleep the night through. When diagnosing short sleeper syndrome, one must be careful to exclude patients with mania or bipolar disorder who, during their manic or hypomanic phase, will also have reduced hours of sleep.

Though the patient complained that she had insomnia, the basis for her perception is founded on the observed short duration of sleep alone. Fundamental to the definition of insomnia aside from shortened sleep time as the result of difficulty falling asleep, maintaining sleep or early arousal, the patient must also have some form of daytime impairment related to the abnormal nighttime sleep. Such impairments include fatigue, malaise, impairment of attention, concentration or memory, social or workplace dysfunction, mood disturbance or irritability, daytime somnolence, lack of motivation or energy, propensity for error or accidents at work, and gastrointestinal symptoms or headaches related to sleep loss. This differentiates sleep deprivation related to chronic insomnia or self-enforced sleep restriction from true short sleepers.

The prevalence of true short sleepers is unknown. They are often grouped together with chronic insomnias and those with chronic sleep deprivation

either voluntarily or due to other medical conditions. A population study by Wu et al in 2011 correlated short sleep duration and metabolic syndrome. Metabolic syndrome was defined as presence of central obesity, hyperglycemia, hypertension and hyperlipidemia. As part of their healthcare screening questionnaire, patients were asked how long they sleep each night along with recording of BMI, waist circumference, blood pressure check, and drawing of fasting glucose level and lipid panel . A total of 7100 patients were included. Men who slept less than 6 hours per night had increased prevalence of metabolic syndrome, but not women[2]. Similar findings were seen in Hall's cross sectional community-based cohort study of 1214 participants[3]. Choi's study of middle aged women also showed positive association of increased prevalence of metabolic syndrome with short sleep duration[4]. Demographic data also has also shown reduced life expectancy with short sleep duration, but these associations may be due to presence of underlying medical conditions causing chronic sleep deprivation due to pain or anxiety[1]. Current studies available cannot clarify the causal effect of sleep duration on reduced life expectancy. Thus population studies that correlated short sleep duration with increased morbidity and mortality may not apply to those patients with short sleeper syndrome. Short sleepers may simply represent the extreme end on the continuum of sleep duration.

The results of the overnight polysomnography were discussed with the patient. The patient was relieved that there was nothing wrong with her sleep. She was reassured of the normalcy of her sleep, which resides on the lower end of the general population and she was also advised to stop using over the counter sleep aides to lengthen her sleep. Sleep hygiene was reviewed with her to minimize risk of development of anxiety associated with sleep or psychophysiologic insomnia.

Conclusion

Short sleepers are occasionally seen in our medical practice seeking help for their insomnia. It is important we that we differentiate them from true insomniacs who are symptomatic from their short sleep time with increased risk of complications as result of sleep deprivation. There is no clear data to indicate that short sleepers are at increased risk of mortality or morbidity due to their short sleep duration. The use of hypnotics to increase their sleep time to fit the social norm is not indicated and may actually increase complications.

REFERENCES

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