New-Onset Insomnia in a Middle-Aged Woman

Brandon Lu, M.D.

Dept of Neurology, Northwestern University, Evanston, IL


A 52-year-old female security guard presents to the clinic complaining of insomnia for the past 6 months. She has been working the night shift (11 pm to 7 am) 5 times per week for the past 10 years but has never previously experienced any difficulties sleeping. She has not changed her routine of going to bed around 10 am following a shift and waking up at 6 to 7 pm. On off days, she actively participates in activities at the local church and keeps busy.

She now complains of inability to maintain sleep, especially after a work night, that results in feeling sleepy for the next few days. There is no snoring by history or any other indication of sleep-disordered breathing.

Which of the following is NOT an appropriate intervention in treating her complaint?

A. Wearing dark sunglasses on the morning drive home
B. Taking a hypnotic after a work night to facilitate sleep
C. Bright light exposure near the end of a night shift
D. Ensuring a conducive sleeping environment (e.g., light proof the bedroom or disconnect the phone)
E. Taking melatonin at bedtime after a night shift

Disclosure Statement
Dr. Lu has indicated no financial conflicts of interest.

Address correspondence to: Brandon Lu, M.D., Dept of Neurology, Northwestern University, 710 N. Lake Shore Dr., 11th Floor, Chicago, IL 60611; Tel: (312) 503-1526; E-mail: brandonlu@gmail.com
DISCUSSION

This patient has circadian rhythm sleep disorder, shift-work type, more commonly called shift work sleep disorder (SWSD), as evidenced by her complaint of insomnia that is temporally associated with a work schedule that overlaps with the usual time for sleep. While approximately 20% of the workforce is involved in jobs that require shift work, it is estimated that 10% of night and rotating shift workers and 1% of the general population has SWSD. Sleep is usually shortened in SWSD because the sleep occurs during a circadian period that is normally associated with wakefulness. The same circadian misalignment, along with sleep deprivation, contributes to the daytime sleepiness. For the patient under discussion, it is unlikely that she sleeps the entire 8 to 9 hours, as she claims, and it is often useful to keep a sleep and work log that also records subjective sleepiness to ensure proper diagnosis.

While it remains unclear why some shift workers complain of insomnia or excessive sleepiness and other do not, older individuals seem to cope less well with shift work. A likely reason is the increased tendency for morningness in older individuals and the associated advancement in circadian phase. This may explain why our patient is now experiencing symptoms not encountered in the past.

Management of SWSD should be directed at realigning the circadian rhythms with the sleep and work schedules, as well as improving sleep and work performance. Methods of improving adaptation of circadian rhythms include intermittent or continuous bright-light exposure during the early part of the night shift in order to avoid the phase-advance portion of the light phase response curve. In addition, avoidance of bright light on the way home from work may be as crucial as bright light therapy at work in improving phase adjustment. Our patient should also be encouraged to attempt to go to sleep as soon as she gets home while her alertness is near its circadian nadir, rather than waiting until her alertness increases.

Melatonin administered at bedtime after the night shift has been shown to improve daytime sleep duration, with limited effects on alertness. The use of hypnotics can also improve sleep but has no effect on circadian-phase alignment. Along with providing pharmacologic interventions, it is always important to optimize sleeping conditions during the day (e.g., light proofing the bedroom and disconnecting the phone) to maximize sleep efficiency.

Although exposure to bright light during work hours can improve alertness, stimulants such as caffeine and modafinil have also been shown to decrease sleepiness and improve performance during night shift. It is important to note, however, that despite improvements in sleepiness and alertness with the use of modafinil, the level of sleepiness remains within the pathologic range, underscoring the importance of providing extra safety measures during night shifts.

REFERENCES