

Web-Based Therapy Improved Insomnia

BY MARY ANN MOON

A cognitive-behavioral intervention delivered via the Internet significantly reduced insomnia severity and contributed to overall sleep improvement in a study of 44 patients.

The 9-week intervention reduced the number of nighttime awakenings and improved sleep efficiency to a similar degree as has been reported for CBT face-to-face therapy, self-help bibliotherapy, group therapy, telephone therapy, and pharmacotherapy, said Lee M. Ritterband, Ph.D., of the University of Virginia Health System, Charlottesville, and his associates.

"An effective and inexpensive Internet intervention would expand treatment options for large numbers of adults with insomnia, especially those whose geographical location prohibits access to relevant care, and could be a substantive first-line treatment choice," they noted (*Arch. Gen. Psychiatry* 2009;66:692-8).

Although traditional CBT is one of the most effective treatments for insomnia, its availability is "severely limited," in part because of a lack of trained clinicians, the uneven geographical distribution of trained clinicians, and the cost of treatment. Dr. Ritterband and his colleagues assessed the feasibility and efficacy of a fully automated Internet-based intervention called SHUTi (Sleep Healthy Using the Internet).

SHUTi provides instruction on going to bed only when sleepy, getting out of bed when unable to sleep, and returning only when sleep is imminent. The program advises patients to avoid sleep-incompatible activities in the bedroom such as watching television, to forgo daytime napping, and to arise at the same hour every day. Patients

also are instructed to improve their sleep hygiene by avoiding nicotine, caffeine, and alcohol before bedtime.

The SHUTi intervention also addresses "unhelpful" beliefs and thoughts, such as the notion that people absolutely need 8 hours of sleep every night or excessive concern about the consequences of insomnia.

Participants fill out the Insomnia Severity Index (ISI) online and complete weekly sleep diaries. That information is then used to individually tailor recommendations for the coming week, all of which is computed automatically using algorithms that were developed specifically for SHUTi, Dr. Ritterband and his colleagues said.

They compared insomnia outcomes between 22 insomnia patients randomly assigned to the SHUTi intervention and 22 control patients who were wait-listed to participate in the program. The mean age of participants was 45 years; they had had sleep problems for an average of more than 10 years, and at the time of enrollment they reported disruptive sleep more than 5 nights per week.

The intervention group showed marked improvement in insomnia severity at the conclusion of the program as well as 6 months later, while the control group showed little change. Sixteen of the intervention subjects (73%) were judged to be in remission by ISI score, compared with none of the control subjects.

"It is important to highlight that the treatment effect sizes found using this Internet intervention, which was delivered with no human support and at a relatively low cost, are comparable to those found in face-to-face studies," the investigators said.

No relevant conflicts of interest were reported. ■



The SHUTi intervention provides instruction on going to bed only when sleepy and getting out of bed when unable to sleep.

CLINICAL GUIDELINES FOR FAMILY PHYSICIANS

Evaluation and Management of Chronic Insomnia in Adults

BY NEIL SKOLNIK, M.D., AND IBRAHIM MIAN, M.D.

Symptoms of insomnia occur in 33%-50% of the U.S. adult population, while 10%-15% of the population has distress or impairment from these symptoms. Patients with comorbid medical or psychiatric conditions are at an increased risk, and insomnia in these groups can be as high as 50%-75%.

Patients with insomnia are more likely to use health care resources, be absent or late to work, and get into accidents. There is also increased risk for suicide, substance use, and immune dysfunction with insomnia. Researchers at the University of Pennsylvania Health System in Philadelphia spelled out recommendations on evaluating and managing chronic insomnia in adults (*J. Clin. Sleep Med.* 2008;4:487-504).

Evaluation

During the patient history and examination, particular attention needs to be paid to eliciting the primary complaint, pre-sleep conditions, sleep-wake schedule, nocturnal symptoms, and daytime activities and function. Common complaints for insomnia patients are an average sleep latency greater than 30 minutes, wake time after sleep onset over 30 minutes, sleep efficiency less than 85% (time actually spent sleeping divided by time in bed), and sleep time under 6.5 hours.

A careful medication history should pay particular attention to identifying use of common offending medications including selective serotonin reuptake inhibitors, selective norepinephrine reuptake inhibitors, MAO inhibitors, caffeine, decongestants, narcotics, beta-blockers, alpha-receptor agents, diuretics, lipid-lowering agents, theophylline, and albuterol. The physical exam should look for sleep apnea risk factors such as obesity, large neck circumference, and other causes of upper airway restrictions. The mental status exam should focus on mood, anxiety, memory, concentration, and alertness. Polysomnography or sleep studies are not indicated in routine evaluations unless there are risk factors for sleep apnea or movement disorders.

A 2-week sleep diary and a sleep assessment scale/questionnaire, such as the Epworth Sleepiness Scale, should be completed prior to treatment to get a more precise definition of the nature of the problem and the degree of difficulty it is causing. The scale can be repeated every 6 months during treatment to monitor the outcome of the intervention.

Treatment

The first step in treatment is to recognize offending factors or conditions such as depression, chronic pain, or medications that may be contributing to insomnia. If a patient is at risk for sleep apnea, a sleep study is indicated. If sleep apnea is found, treatment with continuous positive airway pressure often relieves sleep difficulties. After assessment for directly remediable causes, there are two ma-

ajor arms of treatment available for insomnia: psychological/behavioral therapy and pharmacotherapy. Both have demonstrated short-term efficacy, with behavioral therapy showing sustained improvement for up to 2 years.

Behavioral therapy should be utilized as the initial intervention. Behavioral interventions include stimulus control therapy (establishing the bed as a place only to sleep, removing yourself from the bed if not asleep by 20 minutes), relaxation therapy (breathing techniques, guided imagery, progressive muscle relaxation), cognitive-behavioral therapy (reducing anxiety related to the need to sleep), sleep-

restriction therapy (limiting time spent in bed to total sleep time), paradoxical intention (confronting the fear of staying awake and its potential effects), and biofeedback (reducing somatic arousal).

Though sleep hygiene (general healthy lifestyle, reduced caffeine and alcohol use, regular daytime exercise) has not been shown to be effective alone, it should be used in conjunction with the above interventions.

Short-term hypnotic treatment should be supplemented with behavioral therapies when possible. Here is the general sequence of medication use:

- ▶ Short-intermediate acting benzodiazepine receptor agonists (BzRA) (zolpidem, eszopiclone, zaleplon, temazepam) or ramelteon.
- ▶ Alternate BzRA or ramelteon if the initial choice was unsuccessful.
- ▶ Sedating antidepressant especially when the patient has comorbid depression/anxiety (trazodone, amitriptyline, doxepin, mirtazapine).
- ▶ Combination of BzRA and sedating agents including gabapentin, tiagabine, quetiapine, and olanzapine.

The Bottom Line

Insomnia is diagnosed by taking a thorough history and physical exam. Sleep diaries and scales are helpful for diagnosis and monitoring. Offending agents/factors should be removed first. Behavioral therapies have demonstrated long-term efficacy. Pharmacotherapy is best used for short-term treatment and should be supplemented with behavioral therapy when possible.



DR. SKOLNIK is an associate director of the family medicine residency program at Abington (Pa.) Memorial Hospital. DR. MIAN is a third-year resident in the residency program.

Guidelines are most useful when they are available at the point of care. A free and concise handheld computer version of this guideline is available for download at www.redi-reference.com.