Identifying and Treating Insomnia in the Adult Cancer Patient

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Case Study

A.R. is a 45-year-old woman who was diagnosed with an infiltrating ductal carcinoma of her right breast (T3N0M0; estrogen- and progesterone-receptor–positive, HER2-negative). She underwent a modified radical mastectomy followed by chemotherapy and radiation therapy. Her chemotherapy consisted of doxorubicin and cyclophosphamide every 2 weeks for 4 cycles followed by paclitaxel weekly for 12 weeks. She then went on to receive 60 Gy of radiation to the right chest wall over 33 days without significant irritation apart from the expected skin redness and itching. She was started on a daily dose of 20 mg of tamoxifen shortly after the completion of her radiation therapy. Nine months after the completion of her chemotherapy and radiation therapy, A.R. is returning for a routine follow-up appointment. Her most recent mammogram, CA 27.29, electrolyte panel, complete blood cell count, and liver function panel are all within normal limits. She reports that she is tolerating the tamoxifen well; she experiences no more than four hot flashes per week, which she does not consider troublesome. She has been able to return to work as an elementary school principal and reports that since the time of her diagnosis, she has been having problems with insomnia, depression, and fatigue. A.R. is now requesting a prescription for a sleep aid because she is not sleeping more than 4 hours at night. During her treatment she was able to nap during the day, but since returning to work, the fatigue she is experiencing is impacting her ability to do her job. She reports that the quality of her sleep is poor due to the difficulty she has both falling asleep and staying asleep. She wakes two to three times a night and is not able to get back to sleep. She is concerned that her cancer will return and feels that her job is at risk. To block out her anxiety she sleeps with the television on and has started to nap on the weekends to compensate for her lack of sleep during the week. A.R.'s current medications include the following: fluoxetine (10 mg once a day), tamoxifen (20 mg once a day), ferrous sulfate (325 mg twice a day), and calcium (500 mg twice a day).

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Insomnia is commonly associated with a diagnosis of cancer. One third to three quarters of cancer patients will experience sleep disturbance during their illness (Page, Berger, & Johnson, 2006). Advanced practitioners in the oncology field need to have the knowledge and skill required to address this issue. Because the insomnia that a cancer

patient may experience often coexists with fatigue, pain, and depression, practitioner expertise in the management of insomnia will likely be of greater value to the patient than a prescription for a sleeping aid.

The difficulties that most providers encounter include both the complexity of the problem and the lack of validated interventions to guide them in making clinical decisions. Treating insomnia is further complicated by a lack of formal training in this area, belief on the part of the patient and the provider that sleep disturbances are not important, the time demands of a limited office visit, and finally concerns that treatments for insomnia are associated with abuse and dependence (Benca, 2005). The purpose of this article is to provide information to guide advanced practitioners in the identification and treatment of the insomnia that so many cancer patients experience.

Sleep

The physiologic process of sleep is not fully understood, but the process is vital to life and contributes to metabolism, hormone production, and immune function (Hearson & Sawatzky, 2008). The physiology of sleep is an interrelated process of sleep homeostasis (the balance between being asleep and awake), the circadian rhythm, and the cycles of sleep. The circadian rhythm, often referred to as the 24-hour internal clock, is theorized to be located in the suprachiasmic nucleus located in the hypothalamus (Hearson & Sawatzky, 2008). The suprachiasmic nucleus is influenced by light and dark cycles and orchestrates a feedback system regulating the production of neuropeptides and certain hormones to influence the states of wakefulness or sleepiness (Erickson & Berger, 2010; Hearson & Sawatzky, 2008). For instance, melatonin, a sleep-producing hormone, is released during the absence of light; however, increased cortisol levels are associated with wakefulness (Hearson & Sawatzky, 2008).

The neurophysiology of the sleep cycle is an evolving science and a complex process. The sleep cycle is composed of two distinct states lasting 90 to 120 minutes and repeating three to six times during the night: rapid eye movement (REM) and non-REM (NREM). The sleep cycle begins with NREM, which comprises four stages. Stage 1 is the transition to sleep; in stages 2 and 3, sleep becomes increasingly deeper. The deepest and most restorative sleep occurs during stages 3 and 4 and is often referred to as "delta sleep" (Passarella & Duong, 2008; Rosenthal, 1998).

REM sleep follows NREM sleep; as the sleep cycle continues through the night, less time is spent in stages 3 and 4 of NREM sleep and progressively more time is spent in REM sleep. Characteristically, muscle atonia occurs in REM sleep. Although dreaming can occur in any stage of the sleep cycle, REM sleep is often referred to as "dream sleep." Dreaming occurs during 80% to 90% of this stage. Evidence suggests that REM sleep is necessary for memory formation and mood regulation, but the true purpose of this cycle is not fully understood (Morin, Jarvis, & Lynch, 2007; Passarella & Duong, 2008). A number of physiologic changes take place during the sleep cycle and influence the cardiovascular, respiratory, renal, gastrointestinal, nervous, and endocrine systems. The complexity of sleep cycle architecture can change with age, medication, comorbid conditions, and sleep disorders (Passarella & Duong, 2008; Rosenthal, 1998).

Insomnia

Insomnia, the most common sleep disorder, can occur in all age groups and races. It is generally defined as a subjective complaint of difficulty falling asleep, staying asleep, or awakening despite an opportunity for sleep that results in daytime impairments (Schutte-Rodin, Broch, Buysse, Dorsey, & Sateia, 2008). The daytime impairments likely to be reported by a patient with insomnia may consist of fatigue, irritability, depression, anxiety, and decreased concentration (Schutte-Rodin et al., 2008). Risk factors for insomnia include advancing age, female gender, comorbid conditions, shift work, and polypharmacy. Asthma, gastroesophageal reflux disease, and chronic obstructive pulmonary disease are examples of comorbid conditions that can impact an individual's quality of sleep and lead to the development or worsening of insomnia (Holcomb, 2006; Vawter & Benjamin, 2009).

The multiple classifications and differing diagnostic criteria of insomnia put forth by various organizations complicate the issue of this symptom. The leading organizations defining insomnia are the American Academy of Sleep Medicine, National Sleep Foundation, National Institutes of Health, Sleep Research Society, American Insom-

nia Association, American Board of Sleep Medicine, and Associated Professional Sleep Societies, LLC. Insomnia, which can be classified as a sleep-wake disturbance, can also be classified as primary, idiopathic, or secondary to a comorbid medical/physical or mental disorder.

Defining insomnia is further complicated by the multiple criteria used by authors to determine the duration of time the patient experiences insomnia. For example, in one schema, insomnia is defined as acute if it is present for several nights a week lasting less than 3 weeks and chronic if it is present for at least three nights weekly for at least 1 month. In another schema, insomnia is classified as transient or situational if it lasts for 1 month or less, short term if the duration is more than 1 month but less than 6 months, and chronic if it endures for 6 months or more (Benca, 2005; Passarella & Duong, 2008; Savard & Morin, 2001; Schutte-Rodin et al., 2008; Vawter & Benjamin, 2009). Regardless of the definition, insomnia is a significant problem in the cancer patient's experience.

Cancer-Related Insomnia

Unpleasant physical symptoms such as pain, hot flashes, diarrhea, incontinence, and nausea interfere with sleep and contribute to the development of insomnia (National Cancer Institute [NCI], 2009; Savard et al., 2004). Insomnia is a significant problem in 45% of cancer patients; it contributes to fatigue and a decline in quality of life (Berger, 2009; NCI, 2009). Additionally, insomnia has been shown to be a predictor of mortality in patients with metastatic disease (Miller, Ancoli-Israel, Bower, Capuron, & Irwin, 2008). Identifying and treating insomnia in cancer patients are difficult because it is often underreported and overlaps with other conditions such as depression and pain (Miaskowski & Lee, 1999; McMillan, Tofthagen, & Morgan, 2008; Given, Given, Azzouz, & Stommel, 2001; Savard & Morin, 2001). Patients may believe that a sleep disturbance is temporary and a normal reaction to being diagnosed and treated for cancer (Savard & Morin, 2001).

Problems with sleep can certainly begin with a diagnosis of cancer, but insomnia is more than a psychological reaction. In some cases, it can be the result of the cancer treatment, but it can lead to sleep disturbances that can continue beyond the completion of treatment (Miller et al., 2008; Savard et al., 2004). Medications given as part of cancer therapy or as a treatment for other symptoms (for example, steroids given for chemotherapy-induced nausea and vomiting or endocrine therapies that cause hot flashes) can contribute to insomnia (NIH, 2009; Savard et al., 2004). In their study of the sleep-wake activity rhythms of 95 women before and during chemotherapy for breast cancer, Savard et al. (2009) found that the first administration of chemotherapy was associated with sleep disturbance and subsequent administrations of chemotherapy exacerbated the disturbance.

Diagnosis of Insomnia

ASSESSMENT

The assessment and treatment of insomnia in cancer patients are crucial to improving quality of life and perhaps even to affecting survival. The diagnosis of insomnia begins with a detailed history of the problem to determine the length of time the patient has had a sleep disturbance. Cancer patients can experience acute situational insomnia in response to a stressor, i.e., the diagnosis of cancer. This problem can resolve over time, or chronic insomnia can develop if the patient has maladaptive sleep habits or dysfunctional cognition (Savard & Morin, 2001). The hallmarks of chronic insomnia are napping, spending more time in bed than usual, and irregular sleep schedules (Savard & Morin, 2001).

There are a number of assessment tools available for the assessment and diagnosis of insomnia. The use of diagnostic testing with polysomnography or daytime multiple sleep latency testing is not usually clinically indicated unless there is a suspicion that the patient has symptoms of a comorbid medical or sleep disorder such as sleep apnea or parasomnia (Schutte-Rodin et al., 2008; Vawter & Benjamin, 2009). A wrist actigraph, which is a small portable device that is attached to the patient's wrist, does not analyze sleep stages but is useful in identifying responses to sleep therapy, evaluating circadian rhythm disorders, and evaluating the sleep patterns of healthy individuals (Erickson & Berger, 2010). The wrist actigraph has both clinical and research applications for collecting objective measurements (Erickson & Berger, 2010).

However, because a wrist actigraph may not be available or appropriate in every clinical situa-

Table 1. Assessment questions for insomnia

The questions pertain to the patient's sleep patterns for the prior week.

1. Have you taken any medication, alcohol, or herbal remedy to help you sleep?
2. How would you rate your sleep quality?
3. How many times did you typically wake up during the night?
4. How fatigued or sleepy did you feel during the day?

Note. Adapted from "Critical Components of a Sleep Assessment for Clinical Practice Settings," by K. A. Lee and T. M. Ward, 2005, *Issues in Mental Health Nursing, 26*, pp. 739–750.

tion, the clinician must then rely on the patient's self-report of the problem as an alternative. A 1- to 2-week activity log is a commonly recommended sleep assessment tool that can identify affected areas in the sleep cycle. The log can also be used as an evaluation tool when determining the effectiveness of a treatment plan (Holcomb, 2006; Passarella & Duong, 2008; Schutte-Rodin et al., 2008).

One practical assessment tool for use in the clinical setting is the *Clinical Sleep Assessment for Adults* (Lee & Ward, 2005), which consists of seven questions to screen for sleep disorders; it can also be shortened to four questions (see Table 1). In addition to using an assessment tool, clinicians should also question patients about alcohol and caffeine consumption, nicotine use, over-the-counter medication use, sleep habits, and sleep environment.

TREATMENT

The goal of insomnia treatment is to improve the patient's quality and quantity of sleep and to improve insomnia-related daytime impairments (Schutte-Rodin et al., 2008).

Because optimizing treatment for comorbid conditions should be the first step in treating insomnia, a physical exam should focus on identifying any undiagnosed comorbid conditions. Cancer patients with preexisting general medical conditions such as congestive heart failure, diabetes mellitus, thyroid disorders, chronic obstructive pulmonary disease, gastroesophageal reflux, post-stroke impairment, brain injury, and renal disease are already at risk for insomnia (Hilty, Young, Bourgeois, Klein, & Hardin, 2009). Psychiatric disorders are also important to identify, as patients with depression are 40 times more likely to have chronic insomnia (Hilty et al., 2009). Pain, delirium, depression, nausea, and vomiting should be addressed before proceeding to treating insomnia.

There are no established evidence-based guidelines for treating insomnia in the cancer patient. Although research studies for the use of nonpharmacologic interventions for the treatment of insomnia in cancer patients are promising, most of the recommendations have been extrapolated from other study populations, especially with regard to the use of pharmacotherapy.

NONPHARMACOLOGIC INTERVENTIONS

In the general population with chronic insomnia, the use of nonpharmacologic interventions, specifically cognitive and behavioral therapies (CBT), have proved to be successful and comparable to hypnotic medications (Savard & Morin, 2001). The most efficacious of the therapies include stimulus control, relaxation training, and CBT (see Table 2). A few studies have shown promising results regarding the use of CBT in treating cancer patients with insomnia. The Oncology Nursing Society (ONS) has recognized the significance of four large clinical studies, demonstrated by their movement of CBT to "likely to be effective" on their Putting Evidence Into Practice (ONS-PEP) sleep-wake disturbance card (Berger, 2009).

In one of the four studies, a prospective randomized trial of 179 breast cancer patients (Arving et al., 2007) used CBT-trained oncology nurses or psychologists to initiate therapy. They found a statistically significant difference in the treatment group compared with the control group in the areas of insomnia, dyspnea, and financial difficulties. Similarly, Berger et al. (2009a, 2009b) demonstrated improved sleep outcomes in a randomized controlled study using CBT in 219 breast cancer patients, and Epstein and Dirksen (2007) showed improved sleep in 72 breast cancer survivors who used CBT. Finally, Espie et al. (2008) showed a reduction in insomnia symptoms and improvements in quality of life, fatigue, and daytime well-being in a randomized controlled study that used CBT in 150 posttreatment patients with breast, prostate, colorectal, and gynecologic cancers.

One of the benefits of using CBT is that it is a behavioral approach that can be nurse-initiated or nurse-driven. Hellbom et al. (2001) showed

that oncology nurses could successfully be taught CBT in a 3-hour four-course program. The program was taught by two psychologists and consisted of lectures, homework assessments, and skills practice. The specific intent of the program was to teach oncology nurses the assessment skills required to identify psychosocial problems, to develop skills for performing basic psychological interventions, and to assess the usefulness of the intervention for problems frequently experienced by oncology patients. Additionally, pamphlets intended for nurses and patients were distributed to reinforce techniques taught during the course. The nurses' pamphlets contained information on how to teach the patient CBT, and the patients' pamphlets focused on practicing techniques such as relaxation or distraction.

Advanced practitioners in oncology can create programs to educate staff nurses to perform CBT without requiring a pharmaceutical prescription or order. Once staff members are trained, this therapy could theoretically lower the cost of treating cancer-related insomnia. Clearly, there is a great need to continue and expand CBT research as a treatment for insomnia in cancer patients; these studies are on the forefront of a growing area of research interest.

PHARMACOLOGIC INTERVENTIONS

Pharmacotherapy is the leading intervention for treating insomnia, particularly when patients prefer immediate symptom relief (Morin et al., 2007; Savard & Morin, 2001). Unfortunately, strikingly little clinical evidence exists to demonstrate the efficacy of pharmacologic interventions in patients with cancer. Consequently, the pharmacotherapeutic evidence for treating insomnia is based on placebo-controlled studies conducted for the general population vs. patients with cancer.

Of all the drug therapy options available for insomnia, the US Food and Drug Administration (FDA) has only approved benzodiazepines, benzodiazepine-receptor agonists, and melatonin-receptor agonists (see Table 3). The benzodiazepines—estazolam, flurazepam, quazepam (Doral), temazepam, and triazolam—are generally safe and effective and used to promote sleep onset and maintenance. However, long-term use of these agents has not been established beyond 12 weeks (Hilty et al., 2009; Bhat, Shafi, & El Solh, 2008).

A number of cautionary issues associated with benzodiazepines center around their use in elderly patients and the potential for abuse and physical dependence. Because benzodiazepines can cause cognitive impairment, poor motor coordination, and daytime sedation, their use should be avoided in the elderly and in any patient at high risk for falling. All the benzodiazepines have the potential for abuse; patients can experience physical dependence in as little as several days of use. The sudden discontinuance of a benzodiazepine may precipitate symptoms of withdrawal. Therefore, the lowest effective dose of a benzodiazepine for the shortest period is recommended (Hilty et al., 2009; Passarella & Duong, 2008; Savard & Morin, 2001).

In 2006 the FDA requested that makers of sedative-hypnotic drugs change product labeling to include warnings about the potential of ana-

Table 2. Cognitive and behavioral therapies for chronic insomnia

I. Stimulus control

Purpose: To form positive associations between the bed and sleep and to establish a schedule

Examples of stimulus control:

- Go to bed when sleepy
- Establish a regular sleep time
- Avoid napping

If unable to fall asleep, engage in a relaxing activity until drowsy and then return to bed

II. Relaxation training

Purpose: To lower somatic and cognitive arousal states, which interfere with sleep

Examples of relaxation techniques:

- Progressive muscle relaxation
- Guided imagery
- Abdominal breathing

III. Cognitive behavioral therapy

Purpose: To change the patient's negative beliefs and expectations about sleep through a combination of cognitive therapy and behavior treatments

Example of negative cognitive distortions:

- "I cannot sleep without medications."
- "If I cannot sleep I should stay in bed and rest."
- "My life will be ruined if I cannot sleep."

Note. Based on information from "Clinical Guideline for the Evaluation and Management of Chronic Insomnia in Adults," by S. Schutte-Rodin, L. Broch, D. Buysse, D. Dorsey, and M. Sateia, 2008, *Journal of Clinical Sleep Medicine, 4,* pp. 487–504.

Table 3. US Food and Drug Administration–approved drugs for insomnia

Drug and dosage form	Recommended dosage	Comments/cost
Benzodiazepine receptor agonists		
Eszopiclone 1 mg, 2 mg, 3 mg	2–3 mg 1 mg in elderly or debilitated; max 2 mg 1 mg in severe hepatic impairment; max 2 mg	Schedule IV controlled substance No dose adjustment in renal impairment No short-term use restriction Intermediate acting Cost: $–$$
Zaleplon 5 mg, 10 mg	10 mg; max 20 mg 5 mg in elderly, debilitated, moderate hepatic impairment	Schedule IV controlled substance No dose adjustment in renal impairment Short acting Cost: $–$$
Zolpidem 5 mg, 10 mg	10 mg max 5 mg in elderly, debilitated, or hepatic impairment	Schedule IV controlled substance No dose adjustment in renal impairment Short to intermediate acting Cost: $–$$
Zolpidem controlled release 6.25 mg, 12.5 mg	12.5 mg 6.25 mg in elderly, debilitated, or hepatic impairment	Schedule IV controlled substance No dose adjustment in renal impairment Controlled release Cost: $–$$
Zolpidem oral spray 5 mg zolpidem in 100 µL per spray	10 mg; max 10 mg (2 sprays) 5 mg in elderly, debilitated, or hepatic impairment	Schedule IV controlled substance No dose adjustment in renal impairment Cost: N/A
Zolpidem sublingual (SL) 5 mg, 10 mg	5–10 mg SL; max 10 mg SL 5 mg in elderly, debilitated, or hepatic impairment	Schedule IV controlled substance No dose adjustment in renal impairment Cost: N/A
Selective melatonin-receptor agonist		
Ramelteon 8 mg	8 mg	No short-term use restriction Not a controlled substance Short acting Cost: $–$$
Benzodiazepines		
Estazolam 1 mg, 2 mg	1 mg; max 2 mg 0.5 mg in elderly, debilitated	Schedule IV controlled substance Short to intermediate acting Cost: ¢–$
Flurazepam 15 mg, 30 mg	15–30 mg 15 mg in elderly or debilitated	Schedule IV controlled substance Long acting Cost: ¢–$
Quazepam 7.5 mg, 15 mg	7.5 mg; max 15 mg 7.5 mg in elderly or debilitated	Schedule IV controlled substance Long acting Cost: ¢–$
Temazepam 7.5 mg 15 mg, 30 mg	15–30 mg 7.5 mg in elderly or debilitated	Schedule IV controlled substance Short to intermediate acting Cost: ¢–$
Triazolam 0.125 mg, 0.25 mg	0.25 mg; max 0.5 mg 0.125 mg in elderly or debilitated; max 0.25 mg	Schedule IV controlled substance Short acting Cost: ¢–$

Note. Cost information based on the average wholesale price as published by Thomson Reuters and as listed in the 2009 Edition of the Red Book. ¢ = less than 1 US dollar; $ = 1 to 5 US dollars; $$ = 6 to 10 US dollars; N/A = pricing not available. Based on information from "Clinical Guideline for the Evaluation and Management of Chronic Insomnia in Adults," by S. Schutte-Rodin, L. Broch, D. Buysse, D. Dorsey, and M. Sateia, 2008, *Journal of Clinical Sleep Medicine, 4*, pp. 487–504; Epocrates Rx Online (Premium Version) retrieved March 8, 2010.

phylaxis and anaphylactic reactions, "sleep-driving," and other complex sleep-related behaviors (e.g., making phone calls or preparing and eating food while asleep; AutoBlog.com, 2007).

Benzodiazepine-receptor agonists—eszopiclone, zaleplon, and zolpidem—are effective hypnotic agents with FDA approval to treat insomnia (see Table 3). Since the 1990s, these agents have gained popularity as a result of a better side-effect profile, which has ultimately led to a decline in benzodiazepine use (Morin et al., 2007). The benzodiazepine receptor agonists are noted to have less rebound insomnia (insomnia that ensues after the drug is discontinued); in fact, the sudden discontinuation of some of these agents can result in only a single night of rebound insomnia (Zammit, 2009). The popularity of benzodiazepine receptor agonists is also due in part to the fact that they have less potential for abuse and dependency (Zammit, 2009).

Choosing the appropriate benzodiazepine receptor agonist depends on the patient's self-reported sleep complaints. For a patient having difficulty falling asleep but no difficulty staying asleep, an agent with a rapid onset and a shorter half-life, such as zaleplon, would be preferable. When a patient is having difficulty both falling asleep *and* staying asleep, an agent such as zolpidem or eszopiclone would be a better option (Morin et al., 2007). The controlled-release formulation of zolpidem is a dual-layered tablet that has been specifically designed to help those patients having difficulty falling and staying asleep: the first layer of zolpidem is released immediately to initiate sleep, whereas the second layer is released slowly, resulting in a steady plasma concentration that allows for sleep maintenance (Moen & Plosker, 2006). To prevent interference with the rapid absorption of benzodiazepine receptor agonists, patients should be advised to take them without food (Passarella & Duong, 2008).

Before prescribing either a benzodiazepine or a benzodiazepine receptor agonist, there are multiple considerations and precautions to consider, including cost (see Table 4).

Another agent to be considered is ramelteon (Rozerem), a melatonin-receptor agonist, which is the newest drug class approved by the FDA to treat insomnia. The exact mechanism of the endogenous hormone melatonin is unknown, but it is believed to stimulate the melatonin receptors to influence the circadian rhythm. Ramelteon has high selective activity at the melatonin receptor sites and influences the sleep-onset process (Morin et al., 2007). Ramelteon is rapidly absorbed and has a short half-life, making it an ideal choice for patients reporting only a difficulty in sleep onset (Morin et al., 2007). Ramelteon is uniquely unlike the hypnotic agents in that it is not associated with next-day rebound insomnia and has no withdrawal effects, making it the only FDA-approved drug for the treatment of insomnia that is not a schedule IV controlled substance and hence can be used long term (Passarella & Doung, 2008).

While it is a popular choice, there is limited convincing evidence on the use of low-dose antidepressants to treat insomnia; they are not approved by the FDA for this indication. The commonly used agents trazodone, mirtazapine, doxepin, amitriptyline, and trimipramine should only be considered when there is comorbid depression present and other treatments have failed (Schutte-Rodin et al., 2008). Using off-label drugs such as gabapentin and quetiapine is discouraged because there is no clinical evidence to support their use in treating insomnia. Likewise, over-the-counter products and herbal supplements are not recommended for the treatment of insomnia because clinical data on long-term safety and efficacy have not been established. In addition, the potential may exist for drug-drug interactions with other medications the patient is taking (Passarella & Duong, 2008; Schutte-Rodin, 2008).

Table 4. General considerations when prescribing a sedative or hypnotic agent

- Medication should be taken on an empty stomach to promote absorption.
- Not recommended for use during pregnancy or breastfeeding.
- Must be used with caution when other comorbid conditions are present, such as depression, asthma, chronic obstructive pulmonary disease, sleep apnea, and hepatic or cardiac failure.
- Begin with the lowest dose when treating elderly patients.
- Concomitant use with alcohol or central nervous system depressants will increase psychomotor dysfunction and could contribute to sleep driving or other complex behaviors.
- Abrupt discontinuance or rapid reduction of benzodiazepine dose can cause withdrawal symptoms.

Case Study Resolution

Initially, to mange A.R.'s anxiety and improve her sleep, her fluoxetine dose was increased to 20 mg once daily. She was instructed on basic cognitive and behavioral therapies that included stimulus control by establishing a regular bedtime, eliminating napping, and engaging in a relaxing activity before bedtime instead of watching television. She was also given a small quantity (20 tablets) of zolpidem controlled release (12.5 mg) with the understanding that the sleep aid should be discontinued or reduced when it was no longer needed. On her next visit, A.R. reported that the increased dose of fluoxetine was helpful in controlling her depression and anxiety and that the new bedtime routine was helping with the insomnia. She was able to reduce the use of a sleep aid significantly and now occasionally has problems falling asleep, an improvement over her initial presenting symptoms.

Conclusion

Identifying and treating insomnia in the cancer patient are a complicated process because the sleep disturbances in this population are rarely an isolated problem but rather one of many symptoms. The advanced practitioner needs to be skilled in assessing insomnia and any underlying comorbid conditions. Currently, the available clinical evidence has not demonstrated precise effective treatments for cancer patients with insomnia; therefore, practitioners must make decisions on how to treat insomnia from clinical information based on the general population.

Although hypnotic medications are commonly prescribed to cancer patients with insomnia, there are no clinical studies evaluating the use of these medications specifically in cancer patients. This fact should not discourage practitioners from treating cancer patients presenting with insomnia, as it is clear that this condition affects their quality of life and contributes to depression and fatigue.

Cognitive and behavioral therapy for the treatment of insomnia is supported by promising clinical research and should be considered as an option for patients in whom the potential adverse events associated with pharmacotherapy would be harmful. As an added benefit, these interventions can be nurse-initiated. Finally, patients should be referred to a sleep specialty clinic for certain conditions, such as a history of lifelong sleep problems (e.g., narcolepsy, parasomnia, and suspected sleep apnea); poor responders to treatment should be referred to a sleep clinic as well.

Overall, advanced practitioners need to be skilled in identifying and treating insomnia, a side effect commonly experienced by patients with cancer. Further research into the definitive treatment of insomnia in the cancer patient population is needed.

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