Improving Sleep-Wake Disturbances in Patients With Cancer

Mary Patricia Lamberti, DNP, APRN

Patients with cancer tend to suffer sleep-wake disturbances at a higher rate than the general population. Insomnia and fatigue should be regarded as a significant patient safety issue, as poor sleep can elevate patients' risks of falls, motor vehicle accidents, and acute infectious illnesses. To alleviate those risks, oncology nurses should be familiar with effective evidence-based practices for assessing and improving patients' sleep quality.

Mary Patricia Lamberti, DNP, APRN, is an assistant professor in the Department of Nursing and a nurse practitioner in Student Health Services at Southern Connecticut State University in New Haven. The author takes full responsibility for the content of the article. The author did not receive honoraria for this work. No financial relationships relevant to the content of this article have been disclosed by the author or editorial staff. Lamberti can be reached at lambertim2@southernct.edu, with copy to editor at CJONEditor@ons.org.

Key words: sleep; safety; cancer; interventions

Digital Object Identifier: 10.1188/14.CJON.509-511

The safety risks associated with fatigue among healthcare workers have been widely documented in the professional literature (Berger & Hobbs, 2006; Lockley et al., 2007). What may be less familiar, however, are the safety risks associated with patients' own inadequate sleep. Patients with cancer have an elevated risk of sleep-wake disturbances (Berger, 2009). Poor sleep, in turn, increases the risk of accidents, acute illnesses, and certain chronic conditions (Institute of Medicine, 2006). Oncology nurses should be skilled in assessing their patients' sleep quality and familiar with interventions that can effectively improve sleep.

Several studies have established the prevalence of sleep problems among patients with cancer. A survey (N = 982) by Davidson, MacLean, Brundage, and Schulze (2002) revealed a high prevalence of sleep disorders, including fatigue, insomnia, and excessive daytime sleepiness among patients with different types of cancer. In another study of outpatients with cancer (N = 2,862), sleep problems were reported by 30% and were common in both patients with active cancer and survivors (Sharma et al., 2012). Sleep disturbances have been documented in cancer survivors (Kaleyias, Manley, & Kothare, 2012), hospitalized pediatric patients with cancer (Hinds et al., 2007), those with pain-management problems (Abernethy, 2011), and patients with advanced-stage cancer (Mystakidou et al., 2009).

A variety of mechanisms underlie the association between cancer and sleep disturbances. Cancer and chemotherapy can each cause long-term neuroendocrine disruptions that, in turn, cause sleep disturbances (Miller, Ancoli-Israel, Bower, Capuron, & Irwin, 2008). Cancer-associated pain can interfere with rest (Sharma et al., 2012). Anxiety and rumination also frequently disrupt cancer survivors' sleep (Servaes, Verhagen, & Bleijenberg, 2002).

Consequences

Sleep deprivation has a well-documented effect on vigilance, situational awareness, and reaction time. Sleepiness can lead to impaired attention, performance problems at work and school, and potentially dangerous situations when a patient is driving or taking part in other safety-sensitive tasks (Durmer & Dinges, 2005). In the general population, sleep quality has been conclusively linked to injury rates. Employees with insufficient sleep have more accidents and fatalities at work (Akerstedt et al., 2002; Nakata et al., 2005). Sleep deprivation is a significant contributing factor in motor vehicle accidents (Centers for Disease Control and Prevention, 2011).

In a study of older adults, night sleep problems including trouble falling asleep, trouble with waking during the night, and trouble with waking and getting up in the morning were associated with the occurrence and frequency of falling (Brassington, King, & Bliwise, 2000). Conversely, psychomotor improvement has been associated with increased sleep in different populations (Siengsukon & Boyd, 2009).

Sleep deprivation also tends to weaken certain elements of the immune system, generating an increased risk of acute infectious illness (Besedovsky, Lange, & Born, 2012). For patient with cancer who have recently undergone immunosuppressive chemotherapy, sleep disturbances can add to an already high burden of infectious risk.

Assessment

Assessing sleep is an important component of nursing care and Miller et al. (2008) suggested that it be labeled as the sixth vital sign. Oncology nurses have opportunities to assess their patients for problems with sleepiness and help to prevent the safety hazards that can result.

A systematic review on sleep management for patients with cancer (Howell et al., 2014) noted that many guidelines advise a two-step process of sleep assessment. First, nurses can use a simple screen consisting of one or two questions