Sleep-Wake Disturbances and Quality Of Life in Patients With Advanced Lung Cancer

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Purpose/Objectives: To examine the scope and severity of subjective sleep-wake disturbances in patients with lung cancer and compare them to a group of healthy adults who were similar in age, gender, and race, and to examine the impact of sleep-wake disturbances on measures of health-related quality of life (QOL).

Design: Descriptive, comparative.

Setting: University-based and private urban ambulatory care clinics.

Sample: 43 patients with advanced non-small cell or small cell lung cancer and 36 healthy adults. All participants were cognitively intact, and none had any known neurologic disorder, polysomnographically diagnosed sleep disorder, mood or anxiety disorders, or cerebral metastasis.

Methods: Questionnaires, interview, and medical record review.

Main Research Variables: Nocturnal sleep (quality, quantity, and disturbance), daytime sleepiness, and health-related QOL (physical, mental).

Findings: Patients with lung cancer had poor perceived nocturnal sleep quality and excessive daytime sleepiness that differed significantly from the comparison group. Sleep disturbances in the group with lung cancer were characterized by breathing difficulty, cough, nocturia, and frequent awakenings. Sleep-wake disturbances were significantly associated with poorer health-related QOL after controlling for group. Excessive daytime sleepiness was associated most often with decreases in mental health, whereas poor nocturnal sleep was associated most often with decreases in physical health.

Conclusions: Findings suggest that sleep-wake disturbances are common in patients with lung cancer and that the disturbances are significantly associated with health-related QOL. Patients with lung cancer may be at risk for sleep-disordered breathing.

Implications for Nursing: The magnitude of nocturnal sleep disturbance and daytime sleepiness identified in this study reinforces the importance of ongoing screening and effective intervention for sleep-wake disturbances in patients with lung cancer.

Key Points . . .

- ➤ Nurses cannot rely on a single question of global sleep quality to screen for nocturnal sleep disturbance.
- ➤ Evaluation of daytime sleepiness should be a component of ongoing assessment for sleep-wake disturbances.
- ➤ Patients with lung cancer have many disease- and treatment-related factors that may disrupt the sleep-wake cycle.

Although sleep-wake disturbances have been described in patients with cancer (Clark, Cunningham, McMillan, Vena, & Parker, 2004), the nature and impact of the disturbances have not been well characterized, especially in site- and stage-specific cancer samples. Notably, some studies have suggested that differences in sleep-wake patterns among specific cancer groups can be found and that nocturnal sleep disturbance and daytime sleepiness may be particularly troublesome for patients with lung cancer (Davidson, Maclean, Brundage, & Schulze, 2002; Silberfarb, Hauri, Oxman, & Schnurr, 1993).

Lung cancer is a common malignant disease that exacts significant morbidity and mortality (American Cancer Society, 2006; Brown, Lipscomb, & Snyder, 2001; Malone, Harris, & Luscombe, 1994). Patients with progressive, advanced cancer of the lung experience numerous demographic, lifestyle, psychosocial, clinical, and treatment-induced changes that have the potential to generate nocturnal sleep disturbance and daytime sleepiness (Vena, Parker, Cunningham, Clark, & McMillan, 2004), such as difficulty getting to sleep, early-morning awakenings, prolonged nocturnal wakefulness, and altered sleep architecture (Davidson et al., 2002; Ginsburg, Quirt, Ginsburg, & MacKillop, 1995). In studies of subjectively and objectively measured sleep, people with lung cancer have demonstrated poorer quality of sleep than other groups with cancer as well as control groups (Davidson et al.; Silberfarb et al., 1993).

Excessive daytime sleepiness, or the inability to maintain an alert, awake state, may be an underrecognized problem for patients with cancer. Subjective reports of drowsiness, sedation, or sleepiness have been reported in patients with lung cancer (Davidson et al., 2002; Silberfarb et al., 1993). In addition, daytime napping also has been reported in this population (Davidson et al.; Silberfarb et al., 1993). Sys-

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