

## ARTICLES

# Delirium in Hospitalized Older Patients With Cancer

Stewart M. Bond, RN, MSN, AOCN®, Virginia J. Neelon, RN, PhD, and Michael J. Belyea, PhD

**Purpose/Objectives:** To examine key aspects of delirium in a sample of hospitalized older patients with cancer.

**Design:** Secondary analysis of data from studies on acute confusion in hospitalized older adults.

**Setting:** Tertiary teaching hospital in the southeastern United States.

**Sample:** 76 hospitalized older patients with cancer ( $\bar{X}$  age = 74.4 years) evenly divided by gender and ethnicity and with multiple cancer diagnoses.

**Methods:** Data were collected during three studies of acute confusion in hospitalized older patients. Delirium was measured with the NEECHAM Confusion Scale on admission, daily during hospitalization, and at discharge. Patient characteristics and clinical risk markers were determined at admission.

**Main Research Variables:** Prevalent and incident delirium, etiologic risk patterns, and patient characteristics.

**Findings:** Delirium was noted in 43 (57%) patients; 29 (38%) were delirious on admission. Fourteen of 47 (30%) who were not delirious at admission became delirious during hospitalization. Delirium was present in 30 patients (39%) at discharge. Most delirious patients had evidence of multiple ( $\bar{X}$  = 2.3) etiologic patterns for delirium.

**Conclusions:** Delirium was common in this sample of hospitalized older patients with cancer. Patients with delirium were more severely ill, were more functionally impaired, and exhibited more etiologic patterns than nondelirious patients.

**Implications for Nursing:** Nurses caring for older patients with cancer should perform systematic and ongoing assessments of cognitive behavioral performance to detect delirium early. The prevention and management of delirium hinge on the identification and treatment of the multiple risk factors and etiologic mechanisms that underlie delirium. The large number of patients discharged while still delirious has significant implications for posthospital care and recovery.

### Key Points . . .

- ▶ Delirium is a common and troubling symptom in hospitalized patients with cancer.
- ▶ Older patients with cancer may be at increased risk.
- ▶ Little is known about delirium in this population.
- ▶ The early identification of patients at risk, ongoing assessment of cognitive function and behavior, and treatment of underlying etiologic mechanisms are keys to the prevention and management of delirium.

Eden, Foreman, & Sisk, 1998; Schor et al., 1992), advanced illness (Francis, Martin, & Kapoor, 1990; Inouye, Viscoli, Horwitz, Hurst, & Tinetti, 1993; Rockwood, 1989), comorbidity (Andersson et al.; Eden et al.; Pompei et al., 1994; Rahkonen et al., 2001), and preexisting cognitive impairment (Duppils & Wikblad, 2000; Eden et al.; Fisher & Flowerdew, 1995; Francis et al.; Pompei et al.; Rahkonen et al.; Rockwood, 1989) increase the risk of delirium. Still, little is known about delirium in the population, but the projected aging of the overall population (with increases in cancer and in delirium) underscores the need to better understand the clinical problem.

### Pathophysiologic Basis and Etiologies of Delirium in Older Patients With Cancer

Delirium in older patients with cancer is complex and has multiple etiologies, including age-related physiologic changes in the brain and other organs and associated declines in functional organ reserves (Lipowski, 1990). Engel and Romano

**D**elirium (also called acute confusion) is a syndrome of disordered cognition, attention, and behavior resulting from pathophysiologic disturbances of central nervous system (CNS) function. It is a common and serious problem in hospitalized older adults and has been detected in 14%–55% of hospitalized patients with cancer (Folstein, Fetting, Lobo, Niaz, & Capozzoli, 1984; Levine, Silberfarb, & Lipowski, 1978; Tuma & DeAngelis, 2000). Delirium is the second most common psychiatric diagnosis in patients with cancer (Massie & Holland, 1987); as many as 90% of patients with advanced cancer exhibit delirium in the final weeks of life (Bruera et al., 1992; Lawlor et al., 2000; Massie, Holland, & Glass, 1983; Minagawa, Uchitomi, Yamawaki, & Ishitani, 1996; Morita, Tei, Tsunoda, Inoue, & Chihara, 2001).

Sixty percent of all cancers and 70% of cancer deaths occur in older adults (Yancik & Ries, 2000). Older patients with cancer are particularly susceptible to delirium because age (Andersson, Gustafson, & Hallberg, 2001; Duppils & Wikblad, 2000;

*Stewart M. Bond, RN, MSN, AOCN®, is a doctoral candidate and a John A. Hartford Foundation Building Academic Geriatric Nursing Capacity Scholar and Virginia J. Neelon, RN, PhD, is an associate professor and the director of the Biobehavioral Laboratory, both in the School of Nursing at the University of North Carolina at Chapel Hill; and Michael J. Belyea, PhD, is a research professor in the College of Nursing and Health Care Innovation at Arizona State University in Phoenix. This work was supported, in part, by a grant from the National Institute for Nursing Research T32 NR07091: Interventions to Prevent and Manage Chronic Illness, the John A. Hartford Foundation Building Academic Geriatric Nursing Capacity Scholarship Program, and a doctoral scholarship in cancer nursing (#DSCN-01-203-03-SCN) from the American Cancer Society. (Submitted January 2006. Accepted for publication March 9, 2006.)*

Digital Object Identifier: 10.1188/06.ONF.1075-1083