

Cancer-Related Acute Pain

A systematic review of evidence-based interventions for Putting Evidence Into Practice

Thiruppavai Sundaramurthi, RN, PhD, CCRN, OCN®, Natalie Gallagher, RN, MSN, MPH, OCN®, and Bethany Sterling, MSN, CRNP, AOCNP®, CHPN



BACKGROUND: Identifying and implementing evidence-based interventions for cancer-related acute pain can decrease adverse effects and improve quality of life.

OBJECTIVES: This article presents current evidence supporting interventions to reduce cancer-related acute pain.

METHODS: PubMed and CINAHL® databases were searched to identify studies addressing interventions to manage acute pain in patients with cancer. The interventions are categorized according to the Putting Evidence Into Practice classification schema.

FINDINGS: Interventions that are recommended for practice in the management of acute pain include epidural analgesia and local anesthetic infusions. Interventions likely to be effective include pharmacologic interventions, such as gabapentin and intraspinal analgesia, and nonpharmacologic interventions, such as music therapy. Methodologically stronger clinical trials of new and existing therapies are needed to provide clinicians with accurate resources for managing cancer-related acute pain.

KEYWORDS

cancer-related acute pain; Putting Evidence Into Practice; acute pain

DIGITAL OBJECT IDENTIFIER

10.1188/17.CJON.S3.13-30

ACUTE PAIN CAN ADVERSELY AFFECT THE QUALITY OF LIFE (QOL) of patients with cancer (Barrett et al., 2016; Yang, Sun, Qian, Pang, & Ding, 2012). Acute pain is described as a “complex, unpleasant experience with emotional and cognitive, as well as sensory, features that occur in response to tissue trauma” (Chapman & Nakamura, 1999, p. 392). Acute pain is characterized by sudden onset and is self-limiting, with a short duration ranging from weeks to months (National Institute of Neurologic Disorders and Stroke, 2016). Acute pain in patients with cancer is often related to chemotherapy, radiation therapy, surgical procedures, or diagnostic procedures (e.g., lumbar puncture, biopsy) (National Cancer Institute, 2016). Uncontrolled acute pain can lead to prolonged hospitalization, increased cost, and patient suffering (Oderda, 2012). The total annual incremental cost of health care because of pain ranges from \$560 billion–\$635 billion (in 2010 dollars) in the United States (Gaskin & Richard, 2012). The identification and implementation of evidence-based interventions for this symptom can reduce acute pain, decrease adverse effects, and improve QOL. The purpose of this systematic review is to critically appraise the strength and quality of the evidence regarding the efficacy of pharmacologic and nonpharmacologic interventions to decrease cancer-related acute pain.

Methods

To conduct this review, PubMed, CINAHL®, and Cochrane Library were searched to review and evaluate current evidence on pharmacologic and nonpharmacologic interventions for the management of cancer-related acute pain. This review includes 114 studies of interventions for cancer-related acute pain. Full search results and inclusion and exclusion criteria are described elsewhere in this supplement by Brant, Eaton, and Irwin (2017).

Results

Evidence was categorized as recommended for practice, likely to be effective, effectiveness not established, and not recommended for practice according to the Oncology Nursing Society Putting Evidence Into Practice (PEP) classification schema (Mitchell & Friese, 2009). Detailed descriptions of the search process, classification of evidence, evaluation, and summarization process of studies have been previously described (Johnson, 2014).