

Bisphosphonate Therapy for Metastatic Bone Disease: The Pivotal Role of Nurses in Patient Education

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Purpose/Objectives: To describe the role of bisphosphonate therapy for metastatic bone disease and skeletal-related events associated with some of the most common malignancies, and to highlight the importance and untapped potential of nurses intervening in the education and treatment of patients with these issues.

Data Sources: Contemporary evidence-based studies on the prevalence and impact on quality of life in metastatic bone disease and skeletal-related events, and all major clinical trials describing the efficacy of bisphosphonates for the treatment of metastatic bone disease.

Data Synthesis: Metastatic bone disease is a common consequence of cancer that impairs patient quality of life. Bisphosphonate therapy is effective in preventing or delaying complications associated with metastatic bone disease.

Conclusions: Bisphosphonate therapy can help preserve functional independence and improve the quality of life for many patients with cancer. Poor adherence to bisphosphonate therapy frequently is caused by patients not understanding how the drug works or why they need it. Premature discontinuation of bisphosphonate therapy leaves patients at risk for painful and debilitating skeletal-related events, which reduces their functional independence and impairs their activities of daily living.

Implications for Nursing: Nurses are uniquely positioned to educate patients and their caregivers about the need to begin or continue taking bisphosphonates for treatment of metastatic bone disease and associated skeletal-related events. Nurses often are the most appropriate healthcare providers for counseling patients with metastatic cancer about personal and family issues and for communicating the needs and concerns of patients to their physicians.

Metastatic bone disease can occur with most solid tumors and multiple myeloma and signals significant progression of the underlying cancer (Coleman, 1997; Sabino & Mantyh, 2005). Skeletal-related events are caused by metastatic bone disease and refer to episodes of bone pain requiring the use of opioid analgesics or palliative radiation therapy, bone fractures and the surgery required to stabilize the fractures, spinal cord compression, and hypercalcemia of malignancy. Metastatic bone disease and associated skeletal-related events are the most common causes of pain in patients with cancer and are associated with a measurable decrease in quality of life and increased mortality (DeVita, Hellman, & Rosenberg, 2001; Lipton, 1997; Weinfurt, Anstrom, Castel, Schulman, & Saad, 2006). Bisphosphonate therapy prevents or delays the occurrence of skeletal-related events in patients with cancer (Hillner et al., 2000) and, as a result, directly improves patient quality of life (Rosen, Gordon, Dugan, et al., 2004; Rosen, Gordon, Tchekmedyan, et al., 2004; Saad et al., 2002). However, many

Key Points . . .

- ▶ Nurses should have a thorough understanding of the mechanisms of action and the adverse-event profile of bisphosphonates so they are comfortable educating patients about the drugs and the need for continued treatment.
- ▶ Programs developed for nurse-facilitated patient education must be applicable to a variety of nursing settings and complement existing patient oncology care programs.
- ▶ A nursing consensus guideline regarding the use of bisphosphonate therapy for patients with metastatic bone disease is needed.

patients who could benefit from bisphosphonate therapy do not receive treatment or they prematurely discontinue treatment because of a lack of information on why they should begin or continue to receive the drug. Because their healthcare providers may not have had the time to carefully explain how the drug works and what the common side effects are, the patient may decide to stop taking the medication when mild or expected and transient side effects do occur.

Prevalence and Affect of Metastatic Bone Disease and Skeletal-Related Events

Metastatic bone disease and associated skeletal-related events are common during the later stages of cancer (Coleman, 1997; Lipton, 2005; Saad, Olsson, & Schulman, 2004)

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