Chemotherapy-Induced Peripheral Neuropathy

Terri Armstrong, RN, MS, NP, CS, Lois Almadrones, RN, MS, CFNP, MPA, and Mark R. Gilbert, MD

This article has been chosen as being particularly suitable for reading and discussion in a Journal Club format. The following questions are posed to stimulate thoughtful critique and exchange of opinions, possibly leading to changes on your unit. Formulate your answers as you read the article.

1. Is this article research based? Can we assess the level of evidence being presented?
2. How often do we care for patients at risk for peripheral neuropathies?
3. Describe a situation in which a patient has experienced these side effects. How were the symptoms discerned? What were the patient's complaints? How did occurrence of the symptoms affect the course of the chemotherapy?
4. What assessment parameters do we use to identify patients at risk for or experiencing peripheral neuropathies?
5. How can we improve patient education regarding peripheral neuropathies?
6. What nondrug interventions can we use to treat these symptoms?

At the end of the session, take time to recap the discussion and make plans to follow through with suggested strategies.

Purpose/Objectives: To review the literature documenting the scope, treatment, and prevention of chemotherapy-induced neuropathy.

Data Sources: Published abstracts, primary research literature, and textbook chapters.

Data Synthesis: Recent improvements in the management of other treatment-related toxicities have led to peripheral neuropathy becoming a dose-limiting toxicity of commonly used chemotherapeutic groups such as platinols, vinca alkaloids, and taxanes.

Conclusions: The nervous system has not been the focus of education or training for oncology nurses. Therefore, nurses' ability to educate patients regarding this aspect of their condition has been limited.

Implications for Nursing: With its significant impact on quality of life, peripheral neuropathy treatment and prevention are important components in the care of patients with cancer.

In 1987, Holden and Felde noted that "much of the difficulty educating individuals about peripheral neuropathy arises as a result of lack of knowledge on the parts of physicians and nurses " (p. 13). This still is true today. The nervous system has not been the focus of education or training for oncology nurses. As a consequence, their comfort and ability to educate patients have been limited. Recent improvements in the management of other treatment-related toxicities have led to peripheral neuropathy becoming a dose-limiting toxicity of three commonly used chemotherapeutic groups, particularly platinols, vinca alkaloids, and taxanes. This recognition has made peripheral neuropathy an important component in the care of patients with cancer.

Key Points . . .

- The peripheral nervous system is comprised of three functional divisions: autonomic, motor, and sensory.
- Peripheral neuropathy is a dose-limiting toxicity of cisplatin, paclitaxel, and vincristine and commonly is associated with oxaliplatin and bortezomib.
- Baseline and continued assessment are imperative for early diagnosis.
- Anticonvulsants and antidepressants are the mainstay of treatment for neuropathic pain.

Terri Armstrong, RN, MS, NP, CS, is an advanced practice nurse in the Department of Neuro-Oncology at the University of Texas M.D. Anderson Cancer Center and a doctoral student in the School of Nursing at the University of Texas, both in Houston; Lois Almadrones, RN, MS, CFNP, MPA, is a clinical nurse specialist of gynecologic oncology at Memorial Sloan-Kettering Cancer Center in New York, NY; and Mark R. Gilbert, MD, is a deputy chair and associate professor in the Department of Neuro-Oncology at the University of Texas M.D. Anderson Cancer Center. All three authors are on the speakers bureau of Sanofi-Aventis, makers of Taxotere®, a drug mentioned in this article. *(Submitted January 2004. Accepted for publication May 5, 2004.) (Mention of specific products and opinions related to those products do not indicate or imply endorsement by the* Oncology Nursing Forum *or the Oncology Nursing Society.)*

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