

## LETTERS TO THE EDITOR

### Readers Share Comments and Questions About Extravasation Management

A few times a month, nurses and oncologists contact me for information on how to best manage vesicant extravasations that have just occurred at their institutions. They usually have pulled the latest journal articles on extravasation management and often refer to what a particular author has recommended as we discuss the case at hand.

The nursing literature has few review articles on extravasation management, so I was delighted to see the publication of "Vesicant Extravasation Part II: Evidence-Based Management and Continuing Controversies," by Rita Wickham, PhD, RN, AOCN®, CHPN, Constance Engelking, MS, RN, OCN®, Carmel Sauerland, RN, MSN, AOCN®, and Dominick Corbi, MS, RPh, in the November 2006 issue of the *Oncology Nursing Forum* (Vol. 33, pp. 1143–1150). However, I have some comments and questions for the authors.

Some of the healthcare providers who have called me have said that they went straight to information presented in tables and figures rather than reading the text of an article. With this in mind, it looks like the Table 2 column heading "Suggested Subcutaneous Antidotes" (p. 1146) may have a typo. It should read "Suggested Antidotes" because dimethyl sulfoxide is applied topically and dexrazoxane is an IV treatment. Extravasations occur so rarely that healthcare providers often are not familiar with the details about antidote administration and rely on information in articles such as this one. Although healthcare providers never should rely solely on information in an article before administering an antidote, the authors might want to consider having the table corrected

on the Oncology Nursing Society Web site or possibly republished with the route of administration specifically stated for each agent to help reduce the risk that a "wrong route" type of situation could occur.

Figure 2, "Proposed Strategy for Management of Extravasation," is adapted from an article that describes five case reports and reviews the literature on extravasations of hyperosmolar solutions, vasoconstrictors, and concentrated electrolytes. I am not convinced that this treatment algorithm should be used for vesicant chemotherapy extravasation management because extravasations of hyperosmolar solutions, vasoconstrictors, and concentrated electrolytes are caused by different mechanisms (e.g., ischemia, small blood vessel thrombosis) and are managed accordingly.

If Figure 2 is used to guide anthracycline extravasation management, for instance, stab incisions with saline washout are indicated according to the algorithm because anthracyclines are very likely to cause tissue necrosis when they extravasate. However, the data on saline washout are very limited (e.g., eight patients in Giunta's [2004] and 40 patients in Scuderi and Onesti's [1994] reports—also, both reports included vinca alkaloid as well as doxorubicin extravasations) and, as Wickham et al. noted, saline washout was not always effective, especially for patients with large or deep extravasations. Frost, Gmehling, Azemar, Unger, and Mross (2006) noted that diluting and reducing the concentration of an anthracycline in the tissue is possible only if the anthracycline is free and not tissue bound. Anthracyclines, however, exhibit "extraordinarily rapid distribution and binding to tissues within minutes" of an extravasation (p. 317), so saline washout of anthracycline extravasations may have limited clinical utility. Conversely, recent data on the use

of dexrazoxane for treating anthracycline extravasations appear very promising, and the agent soon will be available commercially in the United States. In view of this new data, which was unavailable to Wickham et al. at the time they wrote their article, would the authors update or change any of the recommendations stated in the article?

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Frost, A., Gmehling, D., Azemar, M., Unger, C., & Mross, K. (2006). Treatment of anthracycline extravasation with dexrazoxane—Clinical experience. *Onkologie*, 29, 314–318.

Giunta, R. (2004). Early subcutaneous wash-out in acute extravasations [Letter]. *Annals of Oncology*, 15, 1146.

Scuderi, N., & Onesti, M.G. (1994). Antitumor agents: Extravasation, management, and surgical treatment. *Annals of Plastic Surgery*, 32, 39–44.

I would like to address an area of concern raised in the article "Vesicant Extravasation Part II: Evidence-Based Management and Continuing Controversies," by Rita Wickham, PhD, RN, AOCN®, CHPN, Constance Engelking, MS, RN, OCN®, Carmel Sauerland, RN, MSN, AOCN®, and Dominick Corbi, MS, RPh, in the November 2006 issue of the *Oncology Nursing Forum* (Vol. 33, pp. 1143–1150). I believe that this area of concern needs to be clarified with the authors and the correct information disseminated to readers. I am referring to page 1146 and the paragraph related to the use of dexrazoxane to treat anthracycline extravasations.

Dexrazoxane is an intracellular chelating agent administered via IV and is approved by the U.S. Food and Drug Administration (FDA) to reduce the risk of cardiomyopathy from doxorubicin in patients with metastatic breast cancer (Ben Venue Laboratories, 2005). Recently, European researchers have investigated its use in treating anthracycline extravasations and, in July 2006, it received approval for use in Europe by the European Medicines Agency (Chustecka, 2006) under the trade name Savene™ (TopoTarget, Copenhagen, Denmark). The drug currently is under review by the FDA as an orphan drug (Chustecka). At the 31st Congress of the European Society for Medical Oncology in October 2006, the results of two clinical trials using dexrazoxane

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