Vesicant Chemotherapy Extravasation Antidotes and Treatments

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Oncology nurses and pharmacists often are given the responsibility of developing or updating institutional policies to manage vesicant chemotherapy extravasations. Antidote and treatment recommendations of vesicant chemotherapy manufacturers, antidotes and treatments approved by the U.S. Food and Drug Administration (FDA), and guidelines and recommendations made by professional oncology organizations are useful resources in this process. This article describes manufacturers' recommendations, lists antidotes and treatments approved by the FDA, and reviews published guidelines and recommendations. Available antidote and treatment formulations and their preparation and administration also are discussed.

Antidotes are agents that neutralize a poison or counteract its effects. They are used in oncology practice when vesicant chemotherapy extravasates from the vein or is administered inadvertently into tissue. Although several drugs and substances have been evaluated as vesicant extravasation antidotes and treatments, data on their safety and efficacy are limited and largely based on the results of animal studies and case reports (Wickham, Engelking, Sauerland, & Corbi, 2006).

In many institutions, oncology nurses and pharmacists develop or update institutional policies and procedures for managing vesicant chemotherapy extravasations. In some settings, chemotherapy guidelines and recommendations published by organizations are adopted for use. Challenges in policy development and guideline implementation include the periodic publication of organizational guidelines (new antidotes or treatments may become available after the publication date) and discontinued manufacturing of a recommended antidote (which occurred from 2001–2004 when Wydase®, the only hyaluronidase product available prior to 2001, was no longer manufactured by Wyeth).

Many interventions still used in clinical practice to treat extravasations are empirical and controversial (Wickham et al., 2006). Clinicians may be unaware that new treatments approved by the U.S. Food and Drug Administration (FDA) have been introduced. In addition, ambiguous and labor-intensive recommendations have been made. For instance, in the full prescribing information for vinorelbine, Bedford Laboratories (2005) stated, "since there are no established guidelines for the treatment of extravasation injuries with vinorelbine, institutional guidelines may be used" (p. 8). With such vague information, institutional policies are difficult to develop. Similarly, the International Society of Oncology Pharmacy Practitioners (2007) stated in its practice standards that, "the medical and pharmaceutical literature should be consulted and a consensus decision made about which agents to use to treat each extravasation" (p. 63). The approach is highly labor-intensive in any setting and may be impractical.

The challenges prompt the questions, "How can oncology nurses and pharmacists best develop or update institutional extravasation policies?" and "What resources are available to assist them in this process?" Because vesicant chemotherapy extravasations rarely occur and antidotes are infrequently administered, clinicians likely will be referring to institutional policies in the event of a vesicant extravasation; therefore, the policies must be current and clearly delineated.

At a Glance

- Periodic publication of guidelines and recommendations and lack of knowledge of antidotes and treatments approved by the U.S. Food and Drug Administration (FDA) present challenges to developing institutional extravasation policies.
- Recommendations of professional oncology organizations vary in their content and may be inconsistent with those of vesicant chemotherapy manufacturers.
- Institutional policies and procedures for managing extravasations should be current and align with recommendations by drug manufacturers, the FDA, and professional oncology organizations.

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