

Rituximab: A New Monoclonal Antibody Therapy for Non-Hodgkin's Lymphoma

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Purpose/Objectives: To review the use of monoclonal antibodies (MAbs), specifically rituximab, in the treatment of non-Hodgkin's lymphoma (NHL) and to describe the nursing management of patients receiving rituximab.

Data Sources: Published articles, abstracts, book chapters, drug manufacturer, lectures, and personal experience with rituximab.

Data Synthesis: NHL ranks sixth among malignancies in incidence and mortality in the United States. The most common subtype, low-grade follicular lymphoma, is considered incurable. Lack of specificity may limit the usefulness of chemotherapy for low-grade follicular NHL. However, MAb therapy may deliver a cytotoxic effect specifically to the targeted cancer cell. Rituximab is the first MAb approved for cancer therapy. Clinical trials indicate that rituximab is efficacious and safe for recurrent or chemotherapy-resistant, B-cell, low-grade NHL. Infusion-related side effects are the most common and can be managed effectively by following the infusion rate recommendations.

Conclusions: Monoclonal antibody therapy is an effective and safe treatment modality for cancer. Infusion-related side effects are managed effectively by following infusion rate recommendations.

Implications for Nursing Practice: Nurses need to be knowledgeable about MAb therapy to educate patients and families regarding the mechanism of action and side-effect profiles of these agents, which often differ from those of chemotherapy or radiation therapy. Nurses should be familiar with the unique side effects of rituximab and also specific infusion-rate instructions, measures to reduce the incidence of side effects, and criteria for stopping the infusion when necessary.

Monoclonal antibody (MAb) therapy has come of age in the late 1990s. Although this biotherapeutic approach has been studied for the past 10 years, recent developments have increased the efficacy and safety of this therapy. The side-effect profiles, dosing procedures, and handling requirements for these biologic agents differ from those of other anticancer modalities, such as chemotherapy. As MAb products enter clinical practice, oncology nurses must understand the science of MAb therapy, side-effect profiles of these agents, and clinical nursing management of potential side effects to provide safe, optimal patient care. One disease for which MAb therapy holds promise is low-grade non-Hodgkin's lymphoma (NHL).

Key Points . . .

- ▶ Non-Hodgkin's lymphoma (NHL) ranks sixth among malignancies in incidence and mortality in the United States.
- ▶ Success with various combinations of chemotherapy and multimodal treatment has resulted in improved but variable remission rates.
- ▶ The results of early clinical trials with rituximab, a monoclonal antibody, have shown promising antitumor activity and safety in patients with B-cell NHL.
- ▶ The side-effects are safe and controllable with premedications and monitoring.

Non-Hodgkin's Lymphoma

NHL comprises a diverse group of malignancies arising from the malignant transformation of normal lymphoid cells. These malignancies exhibit a broad range of immunologic, morphologic, and biologic characteristics (Yarbro & McFadden, 1997). Before 1970, few people survived long-term NHL; most patients with advanced disease died within two years of diagnosis. During the last two decades, however, researchers have made dramatic progress in the use of radiation therapy, chemotherapy, and, more recently, biotherapy. Now, certain types of lymphomas are regarded as potentially curable. During the past 30 years, the overall five-year survival rate for NHL has increased from 31% to 52% (Landis, Murray, Bolden, & Wingo, 1999). Low-grade follicular lymphoma, however, still is regarded as incurable. In patients with low-grade follicular lymphoma, aggressive combination chemotherapy does not improve survival and may compromise quality of life. Because many patients with this disorder often are elderly

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