

Isatuximab

Nursing considerations for use in the treatment of multiple myeloma

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BACKGROUND: Isatuximab is a CD38 monoclonal antibody approved for use in combination with pomalidomide plus dexamethasone to treat adults with relapsed/refractory multiple myeloma who have received at least two prior therapies. Because isatuximab is a relatively new treatment option, published guidelines for oncology nurses are limited.

OBJECTIVES: This article provides nurses with guidance on all aspects of isatuximab administration and patient management to better support those receiving this treatment.

METHODS: Data from the ICARIA-MM (NCT02990338) clinical trial and additional nursing resources were collected and condensed into concise treatment and management recommendations for the care of patients with multiple myeloma undergoing treatment with isatuximab.

FINDINGS: Nursing care of patients prescribed isatuximab includes monitoring of clinical and laboratory parameters and requires knowledge and management of associated adverse events, including infusion reactions and neutropenia. This information could aid oncology nurses in providing optimal, treatment-specific education to patients and caregivers.

KEYWORDS

isatuximab; multiple myeloma; relapsed/refractory; monoclonal antibody; CD38

DIGITAL OBJECT IDENTIFIER

10.1188/21.CJON.706-712

MULTIPLE MYELOMA (MM) IS A NEOPLASM ASSOCIATED WITH accumulation of plasma cells in the bone marrow, bone destruction, and marrow failure (National Comprehensive Cancer Network [NCCN], 2021). MM is the second most frequent hematologic malignancy, accounting for about 1.8% of hematologic malignancies in the United States (Siegel et al., 2020). In 2021, an estimated 34,920 new MM cases and 12,410 deaths are projected to occur in the United States (National Cancer Institute Surveillance, Epidemiology, and End Results Program, n.d.). The treatment landscape of MM has witnessed significant progress in recent decades. Although immunomodulatory drugs and proteasome inhibitors have improved outcomes, patients with MM continue to relapse and/or become refractory to treatment, warranting the need for novel agents with different modes of action (Rajkumar, 2016; Richardson et al., 2018).

Monoclonal Antibodies

Monoclonal antibodies (mAbs) enlist the immune system to fight cancer cells and have become standard of care for treatment in many cancers. Although generally well tolerated, mAbs are known to cause immune-mediated reactions that vary from mild to life-threatening infusion reactions (IRs) (Cáceres et al., 2019; Carney & Ollom, 2008). Common side effects associated with mAb infusion include flu-like symptoms, such as fever, chills, body ache, and muscular pain. More serious side effects include cytokine-release syndrome, for which symptoms can range from mild, flu-like symptoms to a severe life-threatening inflammatory response with an impact on major organ systems. Oncology nurses can follow guidelines and implement strategies to avoid severe reactions, identify them early, and manage them rapidly and effectively.

Signs and symptoms of different types of immune-mediated adverse events (AEs) can overlap, making it difficult to distinguish between them without additional laboratory evaluation (Cáceres et al., 2019). Unlike anaphylactic reactions that can occur within minutes of the infusion, IRs occur within 24 hours of first administration (Doessegger & Banholzer, 2015; Vogel, 2010) and more commonly from 10 minutes to four hours postadministration (Calogiuri et al., 2008). The Common Terminology Criteria for AEs, version 5.0, differentiate among IRs, anaphylaxis, allergic reactions, and cytokine release syndrome, as well as provide the criteria for grading the severity of each type (National Cancer Institute Cancer Therapy Evaluation Program, 2017). It is essential for nurses to prepare for any type of AE, understand the risks involved, document the time of symptom onset, and have a treatment protocol in place for early intervention if a reaction occurs.