Acalabrutinib

Managing adverse events and improving adherence in patients with mantle cell lymphoma

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BACKGROUND: Acalabrutinib is a selective Bruton tyrosine kinase inhibitor approved for patients with relapsed or refractory mantle cell lymphoma, an aggressive B-cell malignancy. Treatment-related adverse events (AEs) can have a negative effect on treatment adherence.

OBJECTIVES: This article aims to provide nurses with firsthand guidance so that they can better support patients with mantle cell lymphoma initiating acalabrutinib.

METHODS: Safety data from the acalabrutinib ACE-LY-004 phase 2 trial in 124 patients with relapsed or refractory mantle cell lymphoma were reviewed, and strategies implemented at the University of Texas MD Anderson Cancer Center to manage trial AEs are described.

FINDINGS: The most common AEs of any grade were headache and diarrhea, but no patients discontinued treatment because of them. When doses were missed or modified, patients were reeducated about the importance of adherence and how to manage AEs. Grade 1–2 AEs were managed with over-the-counter medication, if needed. These strategies allowed for the tracking of occurrences of nonadherence, providing the opportunity to advise and educate patients and to manage AEs more effectively.

KEYWORDS
mantle cell lymphoma; Bruton tyrosine kinase; adverse event; adherence

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MANTLE CELL LYMPHOMA IS A RARE, AGGRESSIVE B-CELL MALIGNANCY with a poor prognosis; it is considered to be incurable (Cheah et al., 2016; Cohen et al., 2017). In addition, mantle cell lymphoma accounts for 3%–6% of all non-Hodgkin lymphomas and has an incidence of approximately 0.55 per 100,000 population (Non-Hodgkin's Lymphoma Classification Project, 1997; Zhou et al., 2008). The median age of patients at diagnosis is 68 years, and the incidence of mantle cell lymphoma is higher in men than in women, and higher in Caucasians than in African Americans (Zhou et al., 2008). Patients usually present with extensive lymphadenopathy, and extranodal involvement is common (e.g., in the bone marrow, gastrointestinal tract, peripheral blood). Diagnosis is confirmed with lymph node or tissue biopsy showing characteristic monomorphic small to medium lymphoid cells with irregular nuclear contours. The chromosomal translocation t(11;14)(q13;32) is present in most cases, which leads to aberrant expression of cyclin D1, and a number of other mutations are also common (Cheah et al., 2016; Vose, 2017). Mantle cell lymphoma prognosis is determined according to the Mantle Cell Lymphoma International Prognostic Index, which incorporates age, performance status, lactate dehydrogenase level, and white blood cell count (Hoster et al., 2008). Most patients will initiate treatment at diagnosis, but a subset with low-risk, asymptomatic disease may adopt an initial watch-and-wait approach. Frontline treatment for mantle cell lymphoma involves combination chemotherapy and immunotherapy or intensive chemotherapy, with or without stem cell transplantation or rituximab maintenance therapy (Cheah et al., 2016; Vose, 2017). These therapies have a high initial response rate; however, relapse occurs in the majority of patients, so there is a need for more durable treatments.

Bruton tyrosine kinase (BTK) is a member of the Tec protein tyrosine kinase family and is an integral part of the B-cell receptor signaling pathway, which is required for the survival, proliferation, and migration of malignant B cells (Ponader & Burger, 2014). Therefore, BTK plays an important role in the progression of B-cell malignancies; for that reason, inhibiting BTK is an attractive target for conditions like mantle cell lymphoma. Three BTK inhibitors (ibrutinib, acalabrutinib, and zanubrutinib) are indicated for patients with mantle cell lymphoma who have received at least one prior therapy. Treatment with the first BTK inhibitor, ibrutinib, resulted in high response rates in patients with relapsed or refractory mantle cell lymphoma (68%, with a complete response in 21% of patients), changing the standard of therapy for the disease (Wang et al., 2013). However,