Steroid-Associated Side Effects

A symptom management update on multiple myeloma treatment

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BACKGROUND: One constant and relatively unchanged aspect of treatment of multiple myeloma (MM) is the use of glucocorticosteroids, or steroids, which can cause a wide range of adverse side effects and harm patients' quality of life.

OBJECTIVES: The objective of this study was to provide updated recommendations on the management of steroid-associated side effects in patients with MM.

METHODS: A study of steroid-associated side effects in MM treatment regimens was reviewed to provide updated recommendations to healthcare professionals.

FINDINGS: Identifying the side effects of steroids and managing them promptly contribute to the success of steroid-containing regimens for patients with MM.

KEYWORDS
multiple myeloma; side effect management; steroids; neuropsychiatric

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MULTIPLE MYELOMA (MM) IS A CHRONIC CANCER of the bone marrow plasma cells, which affects more than 114,000 people worldwide each year (International Agency for Research on Cancer, 2012). The American Cancer Society (2017) predicts 30,280 new cases of MM and 12,590 deaths related to MM in the United States this year. Significant improvements have been made in the diagnosis, treatment, and supportive care of MM, resulting in longer overall survival of patients. One aspect of treatment is the use of glucocorticosteroids, or steroids, such as dexamethasone (Decadron®), prednisone (Deltasone®), and prednisolone (Omnipred®); however, they have been known to cause a wide range of adverse side effects in almost every system of the body. Healthcare professionals can improve the efficacy of myeloma regimens by recognizing the negative side effects of steroids and treating them promptly.

Melphalan (Alkeran®) chemotherapy was introduced in 1958 to treat MM, and steroids were introduced later (Alexanian et al., 1969). In the past, little emphasis was placed on the side effects of steroids because few effective therapies for MM existed. High-dose (HD) melphalan with autologous stem cell support was introduced in the 1980s, and thalidomide (Thalomid®), bortezomib (Velcade®), and lenalidomide (Revlimid®) became available within the past 15 years. Carfilzomib (Kyprolis®), pomalidomide (Pomalyst®), panobinostat (Farydak®), ixazomib (Ninlaro®), elotuzumab (Empliciti®), and daratumumab (Darzalex®) recently have been approved for the treatment of MM in the United States (National Comprehensive Cancer Network [NCCN], 2016). In 2008, the Nurse Leadership Board published a consensus statement for the management of steroid-associated side effects in patients with multiple myeloma (Faiman, Bilotti, Mangan, Rogers, & International Myeloma Foundation Nurse Leadership Board, 2008) to raise awareness of steroid-associated side effects and to provide strategic recommendations.

Since that time, healthcare providers have had a greater awareness of the toxicities associated with steroid therapy, particularly the neuropsychiatric (NP) effects and adverse effects on health-related quality of life (HRQOL). Despite the side effects, corticosteroids remain useful for most patients with MM. Steroids are not classified as chemotherapeutic agents, but their use has improved the overall response rate and progression-free survival of patients in