JL12. Management of Lenalidomide-Associated Cytopenias in Myelodysplastic Syndromes: Practical Take-Aways From Clinical Trials

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Lenalidomide (LEN) is an oral immunomodulatory medication approved for the treatment of patients with transfusion-dependent anemia due to low- or intermediate-1–risk myelodysplastic syndromes (MDS) with del(5q). In clinical trials of LEN in MDS, neutropenia and thrombocytopenia were common; severe myelosuppression was generally managed with dose modifications rather than discontinuations, similar to our clinical experience. If treatment is discontinued too early, patients may not receive enough medication to decrease transfusion needs. Additionally, we have observed patients with sustained, mild-to-moderate, asymptomatic cytopenias that do not need intervention. This is unlike other malignancies in which neutropenia and thrombocytopenia are significant events requiring treatment discontinuation. Therefore, it is important to anticipate and manage LEN-associated cytopenias to extend treatment and optimize outcomes. In this report, MDS-003 and MDS-004 clinical trial data are applied to real-world patient care to illustrate expected cytopenias and outline strategies for practical management of LEN-related cytopenias in MDS patients. Rates, time to onset/recovery, and LEN dose modifications due to neutropenia or thrombocytopenia were examined. These data and expert experience were used to prepare a practical guide for management of cytopenias in LEN-treated MDS patients relevant to advanced practitioners in oncology. Management of cytopenias in LEN-treated MDS patients is dependent on baseline blood counts, bone marrow function, treatment cycle, severity, and symptoms. In the MDS-003/004 trials, rates of grade 3/4 neutropenia and thrombocytopenia were higher in early treatment cycles but decreased thereafter. Severe cytopenias were generally transient and managed primarily with dose reductions and interruptions. A complete blood count (CBC) with differential and platelet count is suggested weekly in the first 8 weeks of treatment when cytopenias are expected and may require temporary dose interruption. LEN should be interrupted and dose reduced for platelet counts < 50,000/µL in cycle 1, but in later cycles, platelet counts as low as 30,000/µL are tolerated in the absence of a need for platelet transfusions or bleeding abnormalities. Unlike in other hematologic malignancies, sustained moderate but asymptomatic cytopenias may persist over months or years with continued transfusion independence and no need for dose modification in the absence of symptoms or decreases in quality of life (Kurtin, 2012). Familiarity with expected cytopenias, planning for effective management, and setting expectations for the patient and family will support the advanced practitioner in management of cytopenias and promote continued therapy in the MDS patient achieving transfusion independence in response to LEN.