Age Matters... Or Does It?

January 01, 2007
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Anemia raises special concerns in older cancer patients. This review addresses the prevalence, causes, and mechanisms of anemia in older individuals, the complications of anemia in this population (including its impact on cancer treatment), and the appropriate management of anemia in the elderly.

Dr. Balducci has provided a very nice overview of the special problem of anemia in older cancer patients. He clearly outlines age-specific considerations regarding causes, mechanisms, and increased burden on hematopoiesis placed by increased iron deficiency and decline in endogenous erythropoietin production with increasing age. The prevalence of and vulnerability toward anemia in older people with cancer is no doubt higher than that of their younger counterparts. Although anemia vulnerability increases with age, and higher levels of endogenous erythropoietin are needed to maintain normal hemoglobin as people age, I am not aware of any study suggesting that higher doses of an erythropoiesis-stimulating protein are needed for equivalent effect in an older person with cancer. Should an older patient with anemia be treated differently than a younger patient? If anemia of chronic inflammation is the main driver of increased anemia vulnerability in older patients, should this be treated with an erythropoietic agent? In the end, Dr. Balducci calls for research evaluating its efficacy and safety before recommending this as a treatment strategy. I agree.

Evolving Consensus

Djulbegovic[1] compared the recently-published Cochrane evidence-based review (Bohlius et al[2]) to the 2001 Blue Cross Blue Shield review used by the American Society of Clinical Oncology (ASCO) and American Society of Hematology (ASH) in their cancer-related anemia practice guidelines. Both reviews found substantially more evidence for patient benefit when the starting hemoglobin was below 10 g/dL. Evidence of benefit to patients starting in the 10 to 12 g/dL range is also available, including benefit to quality of life (eg, Straus et al[3]). Revised ASCO/ASH anemia treatment guidelines are forthcoming; updated guidelines from the National Comprehensive Cancer Network and American Cancer Society can be found online, in both patient and provider versions.[4,5] Across the board, a consensus seems to be evolving. At some point, the clinical and quality-of-life benefits are offset by the increasing risk of thromboembolic events, and a background concern for survival risk related to stimulated tumor growth. This latter risk has not been confirmed, but has been raised in two studies (see Djulbegovic[1] and Bohlius et al[2] for references and discussion). The "magic number" is 12 g/dL in the minds of some and 13 g/dL in the minds of others, and that is reflected in the available practice guidelines. Dr. Balducci's article suggests that older patients may be more susceptible to anemia and its adverse effects, and may be less responsive to treatment. But the recommended doses of erythropoiesis stimulating protein and target hemoglobin appear to be consistent with patients of younger age, insofar as we know from available data.

Conclusions

Anemia is a debilitating problem that has an adverse effect on fatigue, function, and perceived quality of life.[6] It produces a requirement for red blood cell transfusion and can worsen cancer prognosis. The requirement for red blood cell transfusions is clearly reduced in patients receiving erythropoietic therapy. However, relatively high cost and thromboembolic complications are associated with erythropoietin treatment, particularly as hemoglobin level surpasses the normal limit threshold, leaving the provider and patient with the task of titrating therapy to an optimal therapeutic window of 12 to 13 g/dL, probably regardless of patient age.

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Disclosures: Dr. Cella is a consultant for Amgen, and receives grant support from Amgen and Ortho Biotech.

References:


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