

Journal Watch

Effects of Red Blood Cell Transfusion on Anemia-Related Symptoms in Patients with Cancer,

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Abstract: The aim of this study was to assess the effects of red blood cell transfusion, and the subsequent increase in hemoglobin values, on anemia-related symptoms in a cohort of patients with cancer with different survival times. A red blood cell transfusion was recommended to a consecutive sample of patients with hemoglobin levels of 8 ± 0.5 g/dL. The number of units to be ordered was decided according the hemoglobin values with a mean target of increasing the hemoglobin values by approximately 2 g/dL. Hemoglobin values, anemia-related signs and symptoms, including well-being, fatigue, and dyspnea, were recorded at admission (T0), 1 day after the last transfusion (T1), and 15 days afterward (T2) by telephone contact or visit. Well-being, fatigue, and dyspnea were measured on a numerical scale of 0-10. Sixty-one patients were recruited in the period of study. One hundred thirty-three units of red blood cells were transfused (mean 2.18, 95% confidence interval [CI] 0.6). Complete data were available for 40 patients. Hemoglobin values and well-being significantly increased after transfusion (T1), maintaining acceptable values 15 days afterward (T2). Significant changes in fatigue and dyspnea were found immediately after transfusion, although the effect was partially lost 15 days after transfusion. No statistical differences were found between patients with different survival times. Fatigue was significantly lower in patients with longer survival times in comparison with patients with shorter survival times ($p = 0.04$). Blood transfusion in patients with hemoglobin values of approximately 8 g/dL improved anemia-related symptoms on a short-term basis. This benefit is independent of the stage of disease and survival. However, the effects on dyspnea and fatigue tend to decrease within 15 days, despite the maintenance of hemoglobin values attained after transfusions, suggesting that other factors may play a role.

Strengths:

- Good sample size of patients with different expected survival times.
- Reasonable follow up duration of patients of 15 days.
- Efforts made to determine or strongly speculate on the cause(s) of anemia for each patient.
- Use of the Edmonton Symptom Assessment Scale (ESAS) to evaluate symptom response.

Weaknesses: Lack of control group (identified by the authors)

Relevance to Palliative Care: The administration of blood transfusions is not uncommon in patients with loco-regional or advanced cancer. In the absence of these types of studies, it is difficult to discuss with patients the potential beneficial effects (or lack thereof) from blood transfusions, particularly in regards to symptoms of fatigue, and dyspnea.