Anemia of a mild viral infection: The measles vaccine as a model

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To define the hematologic changes during a mild viral infection, 93 infants were immunized with live attenuated measles virus and studied prospectively at 0, 4, 9, 14, 21, and 30 days. Hemoglobin concentration decreased significantly by days 9 and 14. The decrease was > 1.0 g/dL in 8.6% and > 0.6 in 24.3% of the infants. Of the nonanemic infants, 22% became anemic. Serum iron and percentage saturation of transferrin decreased, whereas serum ferritin increased significantly. Mean cell volume, iron-binding capacity, protoporphyrin, and haptoglobin did not show changes. Reticulocyte index and erythropoietin increased significantly at 30 days. Leukocyte counts, Zetacrit, and C-reactive protein did no help to predict the hemoglobin decrease. These results suggest that a mild viral infection in infants induces a significant decrease in hemoglobin that may persist of 14 to 30 days and may be difficult to distinguish from iron deficiency.