PHYSICAL EXAMINATION AND LABORATORY STUDIES

The physical examination was normal except for signs of the recent breast surgery. Laboratory evaluation revealed the following: hemoglobin, 12.3 g/dL; leukocyte count, 4700/mm³ with 2500 neutrophils/mm³; platelet count, 267 000/mm³; and mean corpuscular volume (MCV), 96 fl. After 1 cycle of doxorubicin and cyclophosphamide, her hemoglobin was 11.2 g/dL, her leukocyte count was 4700/mm³ with 3880 neutrophils/mm³, her platelet count was 637 000/mm³, and the MCV was 94 fl. After 4 cycles of doxorubicin and cyclophosphamide and an episode of febrile neutropenia requiring hospitalization, the patient's hemoglobin was 10.7 g/dL, her leukocyte count was 4500/mm³ with 3500 neutrophils/mm³, her platelet count was 284 000/mm³, and the MCV was 97 fl. After 6000 cGy radiation, the hemoglobin was 10.6 g/dL, the leukocyte count was 2500/mm³ with 1600 neutrophils/mm³, the platelet count was 158 000/mm³, the reticulocyte count was 1.6%, and the MCV was 99 fl.

FOLLOW-UP EXAMINATION

Follow-up mammography was negative, and the subsequent physical examination was normal. The patient, however, complained of persistent symptoms of lack of energy, feeling cold, and exercise intolerance.

LABORATORY TESTS

Laboratory tests at this time revealed normal thyroid and renal function and normal serum ferritin, red cell folate, and vitamin B₁₂ levels.

OUTPATIENT COURSE

Because of the symptoms outlined above, the patient was treated with 40 000 U of recombinant human erythropoietin given subcutaneously on a weekly basis. With this regimen, her hemoglobin level rose over 4 weeks to 12 g/dL, and the dose of recombinant erythropoietin was reduced to 30 000 U per week.

Four weeks later, the patient's hemoglobin was 12.7 g/dL, her white blood cell count was 2900/mm³ with 1900 neutrophils/mm³, her platelet count was 190 000/mm³, her reticulocyte count was 1.6%, and the MCV was 99 fl.

With restoration of the hemoglobin to normal levels, the patient's symptoms of coldness and lack of energy were alleviated, and her exertional dyspnea disappeared. Recombinant erythropoietin therapy was discontinued.