

## QUESTION

A 65-year-old male patient with a long history of hypertension and hyperlipidemia presents to the clinic with a 2-week history of increasing fatigue and weakness. He reports that he has been unable to complete his usual activities of daily living, such as walking to the store or climbing stairs. He has also noticed some weight loss and has been experiencing frequent dizziness and lightheadedness, particularly when standing up. He has no chest pain, shortness of breath, or changes in bowel habits. He is currently taking lisinopril, atorvastatin, and aspirin. His medical history is significant for hypertension, hyperlipidemia, and a previous myocardial infarction 10 years ago. He has no known allergies and is not taking any other medications. His family history is notable for a father with a similar condition who died at an early age. Physical examination reveals a patient who appears pale and is tachycardic with a regular rhythm. There are no murmurs, rales, or edema. Laboratory studies show a hemoglobin of 10 g/dL, hematocrit of 30%, and a mean corpuscular volume of 80 fL. The reticulocyte count is 1%. The peripheral smear shows microcytic, hypochromic red blood cells with a few target cells. The iron studies show a low serum iron, low transferrin saturation, and a high total iron-binding capacity. The ferritin level is low. The patient's renal function is normal, and his liver enzymes are within normal limits. The patient's symptoms and laboratory findings are most consistent with which of the following conditions?

- A. Iron deficiency anemia
- B. Vitamin B12 deficiency
- C. Folate deficiency
- D. Hemolytic anemia
- E. Acute leukemia

ANSWER: A

## EXPLANATION



The patient's symptoms and laboratory findings are most consistent with iron deficiency anemia. The patient has a long history of hypertension and hyperlipidemia, which are risk factors for iron deficiency anemia. The patient's symptoms of fatigue, weakness, and weight loss are common in iron deficiency anemia. The patient's laboratory findings, including a low hemoglobin, low hematocrit, and low mean corpuscular volume, are also consistent with iron deficiency anemia. The patient's iron studies, including a low serum iron, low transferrin saturation, and a high total iron-binding capacity, are also consistent with iron deficiency anemia. The patient's ferritin level is low, which is also consistent with iron deficiency anemia. The patient's renal function is normal, and his liver enzymes are within normal limits, which rules out other causes of anemia. The patient's family history is notable for a father with a similar condition who died at an early age, which is also consistent with iron deficiency anemia.

ANSWER: A