

### QUESTION

A 65-year-old male patient with a long history of hypertension and a recent diagnosis of type 2 diabetes mellitus is being treated with lisinopril and metformin. He has been experiencing increasing fatigue and weakness over the past few weeks. His physical examination is unremarkable, and his laboratory tests show a hemoglobin level of 10 g/dL, a hematocrit of 30%, and a mean corpuscular volume (MCV) of 85 fL. His serum ferritin is 100 ng/mL, and his serum transferrin saturation is 20%. His renal function is stable, with a serum creatinine level of 1.2 mg/dL. What is the most likely cause of his anemia?

- A. Iron deficiency anemia
- B. Vitamin B12 deficiency
- C. Folate deficiency
- D. Anemia of chronic disease
- E. Hemolytic anemia

ANSWER: D. Anemia of chronic disease

### EXPLANATION

The patient's anemia is most likely due to anemia of chronic disease (ACD). ACD is a common cause of anemia in patients with chronic medical conditions, such as hypertension and type 2 diabetes mellitus. The anemia is typically normochromic and normocytic, with a hemoglobin level of 10 g/dL, a hematocrit of 30%, and an MCV of 85 fL. The serum ferritin is 100 ng/mL, and the serum transferrin saturation is 20%, which is consistent with ACD. The patient's renal function is stable, with a serum creatinine level of 1.2 mg/dL, which rules out renal anemia. Iron deficiency anemia, vitamin B12 deficiency, and folate deficiency are also possible causes of anemia, but the patient's laboratory findings are more consistent with ACD. Hemolytic anemia is also possible, but the patient's physical examination is unremarkable, and there are no signs of hemolysis.

ANSWER: D. Anemia of chronic disease