

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 mowing the lawn and carrying heavy bags. He has also noticed a 10-pound weight loss over the past few months. His medical history is significant for a recent diagnosis of type 2 diabetes mellitus. He is currently taking lisinopril, atorvastatin, and metformin. His physical examination is unremarkable, and his laboratory work shows a hemoglobin of 10.5 g/dL, hematocrit of 32%, and a mean corpuscular volume of 85 fL. His serum ferritin is 150 ng/mL, and his serum transferrin saturation is 20%. His renal function is stable, with a serum creatinine of 1.2 mg/dL. The patient's diet is generally healthy, but he has been eating less due to his fatigue.

Parameter	Value	Reference Range
Hemoglobin	10.5 g/dL	13.5-15.5 g/dL
Hematocrit	32%	41-53%
Mean Corpuscular Volume	85 fL	82-101 fL
Serum Ferritin	150 ng/mL	50-200 ng/mL
Serum Transferrin Saturation	20%	20-50%
Serum Creatinine	1.2 mg/dL	0.7-1.3 mg/dL

What is the most likely cause of the patient's anemia?

ANSWER

The patient's anemia is most likely due to iron deficiency. The key findings supporting this diagnosis are the low hemoglobin (10.5 g/dL), low hematocrit (32%), and low mean corpuscular volume (85 fL), which are characteristic of microcytic anemia. The low serum ferritin (150 ng/mL) and low serum transferrin saturation (20%) further confirm iron deficiency. The patient's symptoms of fatigue and weakness, along with his weight loss, are consistent with iron deficiency anemia. The patient's diet and medical history do not suggest any other cause of anemia, such as chronic kidney disease or a bone marrow disorder.

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