

QUESTION

A 65-year-old man with a 20-year history of type 2 diabetes mellitus and a 10-year history of hypertension 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. He has lost approximately 10 pounds (4.5 kg) over the past 3 months. He has no other symptoms.

On physical examination, he is thin and appears unwell. His vital signs are normal. His heart rate is 70 beats per minute, and his blood pressure is 130/80 mm Hg. His lungs are clear to auscultation. His abdomen is soft and nontender. His lower extremities are warm and well-perfused. There are no edema or rashes. His reflexes are normal.

His laboratory studies are as follows:

Test	Result
Hemoglobin (Hb)	10.5 g/dL
Hematocrit (Hct)	31%
Mean corpuscular volume (MCV)	88 fL
Red blood cell distribution width (RDW)	13.5%
White blood cell count (WBC)	10,000/mm ³
Differential WBC count	Neutrophils 70%, Lymphocytes 25%, Monocytes 5%
Serum ferritin	100 ng/mL
Serum iron	150 µg/dL
Serum transferrin saturation (TSAT)	15%
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Which of the following is the most likely cause of his anemia?

ANSWER



The most likely cause of his anemia is splenomegaly. The patient's laboratory studies show a microcytic anemia with a mean corpuscular volume (MCV) of 88 fL and a red blood cell distribution width (RDW) of 13.5%. The serum ferritin is 100 ng/mL, which is within the normal range (100-500 ng/mL). The serum iron is 150 µg/dL, which is also within the normal range (50-150 µg/dL). The serum transferrin saturation (TSAT) is 15%, which is within the normal range (15-50%).

The patient's clinical presentation and physical examination findings are consistent with splenomegaly. The spleen is an organ that can become enlarged (splenomegaly) in a variety of conditions, including chronic liver disease, hematologic disorders, and infections. In this case, the patient's anemia is likely due to the spleen's increased capacity to sequester and destroy red blood cells.