

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 blood pressure is well-controlled, and his blood glucose levels are stable. The patient is concerned about his symptoms and is seeking further evaluation. The physician orders a complete blood count (CBC) and a comprehensive metabolic panel (CMP). The CBC shows a hemoglobin level of 11.5 g/dL and a hematocrit of 35%. The CMP shows a serum ferritin level of 100 ng/mL, a serum iron level of 150 µg/dL, and a total iron-binding capacity (TIBC) of 300 µg/dL. The patient's physician is considering the possibility of iron deficiency anemia.

Parameter	Value	Reference Range
Hemoglobin (Hb)	11.5 g/dL	13.8 - 15.5 g/dL
Hematocrit (Hct)	35%	42% - 52%
Serum Ferritin	100 ng/mL	30 - 400 ng/mL
Serum Iron	150 µg/dL	60 - 170 µg/dL
Total Iron-Binding Capacity (TIBC)	300 µg/dL	240 - 460 µg/dL

Based on the laboratory findings, the most likely diagnosis is:

ANSWER

The patient's symptoms of fatigue and weakness, along with the laboratory findings, suggest iron deficiency anemia. The hemoglobin level is low (11.5 g/dL), and the hematocrit is also low (35%). The serum ferritin level is low (100 ng/mL), which is consistent with iron deficiency. The serum iron level is also low (150 µg/dL), and the TIBC is high (300 µg/dL), indicating increased iron binding capacity. The patient's physician should consider iron supplementation and further evaluation of the cause of the iron deficiency.

The correct answer is: Iron deficiency anemia. The patient's symptoms and laboratory findings are consistent with this diagnosis. The low hemoglobin and hematocrit levels indicate anemia, and the low serum ferritin and serum iron levels, along with the high TIBC, are characteristic of iron deficiency. The patient's physician should consider iron supplementation and further evaluation of the cause of the iron deficiency.