

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 persistent fatigue and weakness over the past several weeks. His physical examination is unremarkable, and his laboratory tests show a hemoglobin level of 11.5 g/dL, hematocrit of 33%, and a mean corpuscular volume (MCV) of 88 fL. His renal function is stable, with a serum creatinine of 1.2 mg/dL. The most likely cause of his symptoms is:

- A. Iron deficiency anemia
- B. Vitamin B12 deficiency
- C. Folate deficiency
- D. Chronic kidney disease
- E. Hypothyroidism

ANSWER: B

EXPLANATION: The patient's symptoms of fatigue and weakness, along with the laboratory findings of a microcytic anemia (MCV 88 fL), suggest a deficiency of a nutrient involved in hemoglobin synthesis. The most common causes of microcytic anemia are iron deficiency and vitamin B12 or folate deficiency. However, the patient's renal function is stable, and there are no signs of iron deficiency (e.g., pica, brittle nails). The most likely cause is vitamin B12 deficiency, which can occur in patients with diabetes mellitus due to autoimmune gastritis or malabsorption. Folate deficiency is also possible, but it typically results in a macrocytic anemia. Chronic kidney disease and hypothyroidism are unlikely causes given the patient's stable renal function and the absence of other clinical features.

QUESTION



- A. Metacarpal
- B. Proximal phalanx
- C. Distal phalanx
- D. Carpometacarpal joint
- E. Metatarsal
- F. Proximal phalanx
- G. Distal phalanx
- H. Carpometacarpal joint
- I. Metatarsal

ANSWER: C

EXPLANATION: The diagram shows the bones of the hand and wrist. The bones are labeled with letters A through Z. The most likely cause of the patient's symptoms is a fracture of the distal phalanx of the thumb (labeled C). This injury is commonly known as a "skier's thumb" or "gamekeeper's thumb" and is caused by a sudden forceful abduction of the thumb. The injury involves the rupture of the ulnar collateral ligament (UCL) of the thumb. The other options listed are not the most likely cause of the patient's symptoms.