

QUESTION

1. 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 presents with a 2-week history of increasing fatigue, weakness, and weight loss. He also reports frequent urination and increased thirst. Physical examination reveals a blood pressure of 150/90 mmHg, a heart rate of 100 bpm, and a respiratory rate of 18. There are no murmurs, rubs, or gallops. The lungs are clear to auscultation. The abdomen is soft and non-tender. The lower extremities show no edema. Laboratory studies show a hemoglobin of 10 g/dL, a hemoglobin A1c of 8.5%, a serum creatinine of 1.5 mg/dL, and a serum sodium of 125 mEq/L. Urinalysis shows a specific gravity of 1.020, a pH of 6.5, and a positive result for glucose and ketones. The patient's most likely diagnosis is:

- A. Hypertensive crisis
- B. Acute kidney injury
- C. Type 1 diabetes mellitus
- D. Heart failure
- E. Anemia

ANSWER: C

EXPLANATION

The patient's symptoms and laboratory findings are consistent with type 1 diabetes mellitus. The presence of a positive urine glucose and ketones, along with a significantly elevated hemoglobin A1c, strongly suggests this diagnosis. The patient's symptoms of fatigue, weakness, weight loss, and polyuria are classic for uncontrolled diabetes. The physical examination findings, including hypertension and tachycardia, are also consistent with this condition. The patient's history of hypertension and type 2 diabetes mellitus does not rule out the possibility of type 1 diabetes, as the two conditions can coexist.

The other options are less likely. Hypertensive crisis (A) is characterized by a severe increase in blood pressure, but the patient's symptoms and laboratory findings are not consistent with this condition. Acute kidney injury (B) is characterized by a rapid decline in renal function, but the patient's serum creatinine is only mildly elevated and his urine output is not decreased. Heart failure (D) is characterized by symptoms of fluid overload, such as edema and dyspnea, which are not present in this patient. Anemia (E) is characterized by a low hemoglobin level, but the patient's symptoms and laboratory findings are not consistent with this condition.