

QUESTION

A 50-year-old man with a 20-year history of type 2 diabetes mellitus and a 10-year history of hypertension is brought to the emergency department by ambulance with acute-onset confusion and weakness of the right arm and leg. He has a 20-pack-year history of smoking and a 10-year history of alcohol use. He is currently taking metformin, lisinopril, and insulin glargine. His last meal was a sandwich and a glass of milk 4 hours before presentation. His vital signs are temperature 37.8°C (100°F), heart rate 110/min, blood pressure 180/100 mm Hg, and respiratory rate 20/min. He is unable to give a history of present illness.

On physical examination, his pupils are 4 mm and reactive to light. He has tachycardia without murmurs, crackles, or rales. He has hyperreflexia and a Babinski sign on the right. His laboratory studies are as follows:

Test	Result
Serum glucose	150 mg/dL
Serum sodium	125 mEq/L
Serum potassium	3.5 mEq/L
Serum calcium	8.5 mg/dL
Serum magnesium	1.8 mg/dL
Serum phosphate	2.5 mg/dL
Serum bicarbonate	18 mEq/L
Serum lactate	2.5 mmol/L
Serum salicylate	0.2 mg/dL
Serum acetaminophen	0.1 mg/dL
Serum ethanol	0 mg/dL
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Serum ethanol	0 mg/dL

His computed tomography scan of the head shows no acute abnormalities. His electrocardiogram shows sinus tachycardia. His chest radiograph shows no acute abnormalities. His magnetic resonance imaging scan of the brain shows no acute abnormalities. He is intubated and mechanically ventilated. He is given 200 mg of intravenous lorazepam for agitation. His vital signs are temperature 37.8°C (100°F), heart rate 110/min, blood pressure 180/100 mm Hg, and respiratory rate 20/min. He is unable to give a history of present illness.

Which of the following is the most likely cause of his acute-onset confusion and weakness?

A. Hypoglycemia

B. Hyponatremia

C. Hypocalcemia

D. Hypomagnesemia

E. Hypophosphatemia

ANSWER

B. Hyponatremia



Hyponatremia is the most likely cause of his acute-onset confusion and weakness.

Hyponatremia is a common electrolyte abnormality in patients with chronic medical conditions.

It is often caused by inappropriate antidiuretic hormone secretion.

Hyponatremia can cause confusion and weakness.

Other causes of confusion and weakness include hypoglycemia, hypocalcemia, hypomagnesemia, and hypophosphatemia.

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