

QUESTION
 A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, weakness, and confusion. Physical examination reveals a sunken chest, tachypnea, and asterixis. Laboratory studies show a serum ammonia level of 100 $\mu\text{mol/L}$ (normal < 60 $\mu\text{mol/L}$), a serum lactate level of 4.5 mmol/L (normal < 2.0 mmol/L), and a serum bicarbonate level of 18 mmol/L (normal 22–28 mmol/L). The patient's arterial blood gas shows a pH of 7.35, a partial pressure of CO_2 of 35 mmHg , and a partial pressure of O_2 of 85 mmHg .

Which of the following is the most likely cause of the patient's confusion?

A. Hypoglycemia
 B. Hypocalcemia
 C. Hypomagnesemia
 D. Hypokalemia
 E. Hypoxemia

ANSWER
 The correct answer is **D**. The patient's confusion is most likely caused by hypokalemia. The patient's clinical presentation, including weight loss, weakness, and confusion, along with physical findings of a sunken chest, tachypnea, and asterixis, are consistent with alcoholic liver disease. The laboratory studies show a metabolic acidosis with a serum bicarbonate level of 18 mmol/L and a serum lactate level of 4.5 mmol/L . The arterial blood gas shows a pH of 7.35, a partial pressure of CO_2 of 35 mmHg , and a partial pressure of O_2 of 85 mmHg . The patient's serum ammonia level is elevated at 100 $\mu\text{mol/L}$. The patient's hypokalemia is likely due to the use of diuretics for the management of ascites. Hypokalemia can exacerbate the metabolic acidosis and lead to the development of asterixis and confusion.