

QUESTION

1. A patient with a long history of chronic kidney disease (CKD) is being treated with a diuretic. The patient's serum electrolyte levels are as follows: sodium 130 mEq/L, potassium 2.8 mEq/L, calcium 8.5 mg/dL, and magnesium 0.8 mg/dL. The patient is also receiving a beta-blocker and a statin. The patient's current medications are lisinopril, furosemide, metoprolol, and atorvastatin. The patient's blood pressure is 140/90 mmHg and their heart rate is 60 bpm. The patient is experiencing muscle weakness and fatigue. The patient's renal function is stable with a creatinine of 2.5 mg/dL and a GFR of 30 mL/min/1.73 m².

ANSWER

The patient's symptoms are likely due to hypokalemia and hypomagnesemia. The low potassium level (2.8 mEq/L) is causing muscle weakness and fatigue. The low magnesium level (0.8 mg/dL) is also contributing to these symptoms. The patient's CKD and the use of a diuretic (furosemide) are likely contributing to these electrolyte abnormalities. The patient's blood pressure is well-controlled with lisinopril, and their heart rate is stable with metoprolol. The patient's renal function is stable with a creatinine of 2.5 mg/dL and a GFR of 30 mL/min/1.73 m².

Management: The patient's potassium level should be corrected to 3.5-5.0 mEq/L. The patient's magnesium level should be corrected to 0.8-1.2 mg/dL. The patient's diuretic should be held until their electrolyte levels are corrected. The patient's blood pressure should be monitored and adjusted if necessary. The patient's heart rate should be monitored and adjusted if necessary. The patient's renal function should be monitored and adjusted if necessary.

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