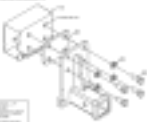


QUESTION
 A 60-year-old male patient with a long history of hypertension and a recent diagnosis of type 2 diabetes mellitus is being treated with lisinopril and metformin. He reports feeling increasingly fatigued and has noticed some swelling in his lower extremities. His blood pressure is 150/95 mmHg, heart rate is 100 bpm, and oxygen saturation is 96% on room air. Physical examination reveals bilateral lower-extremity edema and a clear lung field. Laboratory tests show a serum sodium of 130 mEq/L, serum potassium of 3.5 mEq/L, and a serum creatinine of 1.8 mg/dL. What is the most likely cause of his symptoms?

ANSWER
 A. Heart failure



EXPLANATION
 The patient's symptoms of fatigue and lower-extremity edema, along with his elevated blood pressure and abnormal laboratory values (sodium 130 mEq/L, potassium 3.5 mEq/L, creatinine 1.8 mg/dL), are most consistent with heart failure. Heart failure can lead to fluid retention and edema, particularly in the lower extremities. The patient's long history of hypertension and recent diagnosis of type 2 diabetes mellitus are risk factors for heart failure. Lisinopril, an ACE inhibitor, is commonly used to treat heart failure and hypertension. Metformin is used for type 2 diabetes mellitus. The patient's symptoms are not consistent with aortic stenosis, which would typically present with aortic regurgitation and aortic valve disease. The patient's symptoms are also not consistent with chronic kidney disease, which would typically present with a higher serum creatinine level and a lower serum sodium level.

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 reports feeling increasingly fatigued and has noticed some swelling in his lower extremities. His blood pressure is 150/95 mmHg, heart rate is 100 bpm, and oxygen saturation is 96% on room air. Physical examination reveals bilateral lower-extremity edema and a clear lung field. Laboratory tests show a serum sodium of 130 mEq/L, serum potassium of 3.5 mEq/L, and a serum creatinine of 1.8 mg/dL. What is the most likely cause of his symptoms?

ANSWER
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EXPLANATION
 The patient's symptoms of fatigue and lower-extremity edema, along with his elevated blood pressure and abnormal laboratory values (sodium 130 mEq/L, potassium 3.5 mEq/L, creatinine 1.8 mg/dL), are most consistent with heart failure. Heart failure can lead to fluid retention and edema, particularly in the lower extremities. The patient's long history of hypertension and recent diagnosis of type 2 diabetes mellitus are risk factors for heart failure. Lisinopril, an ACE inhibitor, is commonly used to treat heart failure and hypertension. Metformin is used for type 2 diabetes mellitus. The patient's symptoms are not consistent with aortic stenosis, which would typically present with aortic regurgitation and aortic valve disease. The patient's symptoms are also not consistent with chronic kidney disease, which would typically present with a higher serum creatinine level and a lower serum sodium level.