

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 78 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 132 mEq/L, potassium of 3.8 mEq/L, and a creatinine of 1.2 mg/dL.

ANSWER
 The patient's symptoms and physical findings are consistent with fluid overload, likely due to the combination of hypertension and heart failure. The presence of lower-extremity edema and a clear lung field suggests a right-sided heart failure. The patient's blood pressure is significantly elevated, and his potassium level is slightly low. The most appropriate management would be to adjust his medications to better control his blood pressure and manage his heart failure.

Parameter	Value	Reference Range
Serum Sodium	132 mEq/L	136-145 mEq/L
Serum Potassium	3.8 mEq/L	3.5-5.0 mEq/L
Serum Creatinine	1.2 mg/dL	0.7-1.3 mg/dL
Blood Pressure	150/95 mmHg	<120/80 mmHg
Heart Rate	78 bpm	60-100 bpm
Oxygen Saturation	96% on RA	>92% on RA

KEY POINTS

- 1. Hypertension and heart failure can coexist, leading to complex clinical presentations.
- 2. Lower-extremity edema and clear lung fields suggest right-sided heart failure.
- 3. Laboratory tests (sodium, potassium, creatinine) provide essential information for diagnosis and management.
- 4. Medication adjustments are crucial for managing blood pressure and heart failure symptoms.

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