WHAT'S THE TAKE HOME?

A 47-Year-Old Man Develops Multiorgan Failure

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Volume 66 - Issue 6 - June 2026

Introduction. A 47-year-old man presented to the emergency room (ER) after a 2-day acute illness characterized by fever, prostration, and cough.

Patient history. Two days prior to presenting in the ER, the patient experienced a shaking chill. Overnight and into the morning, he became febrile and developed a cough, which progressed, along with his fever, sweats, and weakness. He took acetaminophen before presenting to the ER, but his symptoms remained. He developed pleuritic chest pain on his right side, and his cough was productive of bloody, rust-colored purulent sputum. He was also experiencing shortness of breath. His family reports that he seems to be confused and disoriented.

The patient's personal medical history included decades of smoking (about one pack per day) although he denied any prior shortness of breath. He noted a "morning cough with sputum." He also drank significantly, likely well more than 2 drinks per day. He has a history of hypertension for which he takes an ACE inhibitor. He works in his family's business as a certified public accountant. He is not married and lives in the household of his sister and brother-in-law.

Physical examination. The patient's temperature was 103.4 F, pulse, 110/min, BP, 90/70 and respirations, 24/min. Salient findings included tachycardia without obvious murmurs and signs of consolidation in the right lung. Mucosae were dry.

Diagnostic testing. The patient's laboratory tests included hematologic, metabolic, arterial blood gas, radiographic, and microbiologic findings. **(Table 1).**

Table 1. Diagnostic findings and interpretation

Test	Result	Interpretation
Hemoglobin	16 g/dL	Within normal range
White blood cell count	23,000 with many band forms	High; normal range approximately 4,500 to 11,000/µL
Platelets	90,000	Low; normal range approximately 150,000 to 450,000/µL
Serum sodium	132 mEq/L	Low; normal range approximately 136 to 145 mEq/L
Creatinine	2.8 mg/dL	High; normal range approximately 0.74 to 1.35 mg/dL for adult men
Lactate	5.3 mmol/L	High; normal range approximately 0.5 to 2.2 mmol/L

Test	Result	Interpretation
Arterial blood gas: PaO_2	76	Within normal range
Oxygen saturation	86%	Low; normal range approximately 95% to 100%
Arterial blood gas: PCO_2	32 mm Hg	Low; normal range approximately 35 to 45 mm Hg
Arterial blood gas: pH	7.38	Within normal range
Chest x-ray	Lobar consolidation of the right lower and middle lobes	
Sputum Gram stain	Copious PMN forms and gram-positive diplococci	

Which of the following statements is *incorrect* as it pertains to the presented patient?

A. Despite the significant mortality risk of the acute illness, with recovery from the acute insult, patients can be expected to have full recovery at 6 months.

B. The triggering causation of the syndrome will almost always be an infection and addressing it is paramount.

C. Restoration and maintenance of adequate tissue perfusion is an extremely important aspect of therapy and balanced crystalloid is preferred.

D. Other adjuvant intensive care unit (ICU) maneuvers may include the use of pressors and administration of stress dosage of glucocorticoids.