

**QUESTION**  
 A 65-year-old male patient with a long history of hypertension and hyperlipidemia presents to the clinic with a 2-week history of increasing fatigue, weight loss, and intermittent fevers. He reports that the symptoms are worse in the morning and have not responded to over-the-counter pain relievers. He has no cough, hemoptysis, or chest pain. He has a 20-pack-year smoking history and is currently a former smoker. He is on lisinopril and atorvastatin. His medical history is otherwise unremarkable. On physical examination, he appears ill but is afebrile, with a heart rate of 98 bpm, blood pressure of 145/85 mmHg, and oxygen saturation of 96% on room air. There are no crackles, wheezes, or rales. His lungs are clear to auscultation. His abdomen is soft and non-tender. There are no lymphadenopathy or splenomegaly. His laboratory work shows a hemoglobin of 11.5 g/dL, hematocrit of 35%, and a white blood cell count of 12,000 cells/mm<sup>3</sup> with a neutrophilic leukocytosis. His erythrocyte sedimentation rate (ESR) is 45 mm/hr, and his C-reactive protein (CRP) is 15 mg/L. His chest X-ray shows a normal heart size and clear lung fields. His computed tomography (CT) scan of the chest is also unremarkable.

**ANSWER**  
 The patient's presentation is consistent with a systemic inflammatory response, likely due to a chronic infection or a systemic autoimmune disease. The symptoms of fatigue, weight loss, and intermittent fevers, along with the laboratory findings of leukocytosis, elevated ESR, and elevated CRP, are characteristic of a systemic inflammatory response. The absence of focal lung pathology on chest X-ray and CT scan suggests a systemic rather than a localized process. The patient's history of hypertension and hyperlipidemia, along with his current medications, does not appear to be directly related to his current symptoms.

## KEY POINTS

- Systemic inflammatory response (SIRS) is a clinical syndrome characterized by two or more of the following: fever, leukocytosis or leukopenia, tachycardia, and tachypnea.
- Common causes of SIRS include infection, trauma, surgery, and pancreatitis.
- In the context of a patient with chronic symptoms and laboratory abnormalities, a systemic autoimmune disease such as rheumatoid arthritis or systemic lupus erythematosus should be considered.
- Further evaluation should include a detailed history and physical examination, as well as laboratory tests such as rheumatoid factor, anti-nuclear antibody (ANA), and specific autoantibodies.
- Treatment of SIRS depends on the underlying cause. Infection should be treated with appropriate antibiotics, while autoimmune diseases may require immunosuppressive therapy.