



CLINICAL QUIZ

A Diagnosis Not to Miss!

Mohamad El Hawari, M.D.¹, Souraya Alameddine, M.D.², Jimmy Doumit, M.D.¹

¹University of Kansas School of Medicine-Wichita, Department of Internal Medicine

²Wichita State University, Department of Biological Sciences

A 25-year-old previously healthy male patient, who was a smoker, presented with a one-week history of cough. He experienced a sudden onset of left-sided chest pain while coughing on the day of presentation. He denied fever, sputum production, recent trauma, or family history of lung disease. He had mild shortness of breath. His exam revealed a thin, tall patient with mild distress. Vital signs were stable. Oxygen saturation was normal. His neck exam showed no abnormalities. The chest exam showed decreased air entry on the left side and hyperresonance to percussion with no local tenderness.



What is the most likely diagnosis?

- A. Chronic obstructive pulmonary disease
- B. Pulmonary embolus

- C. Pneumonia
- D. Pneumothorax

Correct Answer: D. Pneumothorax

This patient had primary spontaneous pneumothorax which occurs without an inciting factor in a person with no clinical lung disease.¹ It typically occurs in tall, thin males between the ages of 10 and 30 years. Smoking cigarettes increases the risk of primary spontaneous pneumothorax in men by as much as a factor of 22 in a dose-dependent manner.² Clinically, presentation varies from asymptomatic to life-threatening tension pneumothorax according to its size. Chest x-ray shows a white visceral pleural line, which is separated from the parietal pleura by a collection of gas with absent pulmonary vessels. Treatment depends on the size and clinical stability of the patient and includes observation, supplemental oxygen, needle aspiration of intrapleural air, chest tube insertion, and thoracoscopy.³

References

- ¹ Sahn SA, Heffner JE. Spontaneous pneumothorax. *N Engl J Med* 2000; 342(12):868-874. PMID: 10727592.
- ² Bense L, Eklund G, Wiman LG. Smoking and the increased risk of contracting spontaneous pneumothorax. *Chest* 1987; 92(6):1009-1012. PMID: 3677805.
- ³ Baumann MH, Noppen M. Pneumothorax. *Respirology* 2004; 9(2):157-164. PMID: 15182264.

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