# SUDDEN UPPER BACK PAIN

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THE CASE

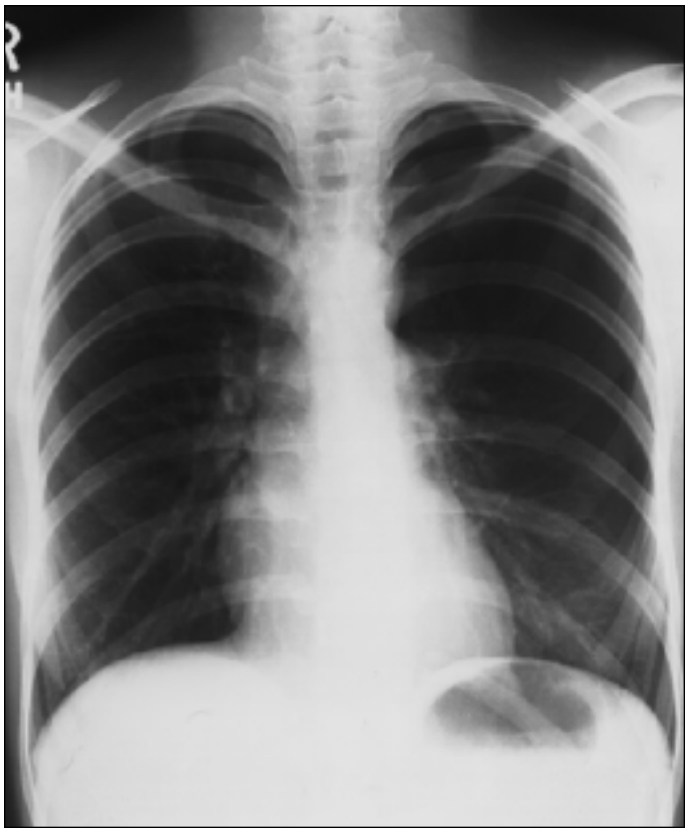

FIGURE 1

*A 20-year-old Lebanese lady who while dressing had sudden pain over the left upper back. She was rushed to the emergency room (ER).*
*The history was negative for feverishness. She had no symptoms suggestive of respiratory tract infection. She is non-smoker and is not on any medication. There is no similar history in family members.*
*The physical exam revealed a weight of 48 kg and a height of 166 cm. Respiratory rate was 14/minute, oral temperature and blood pressure were normal. Examination of the lungs and cardiovascular system was negative as reported by the ER physician.*
*A chest X ray (figure 1) was ordered. The physician on call did not notice any abnormality in the CXR and discharged the patient on pain killer as needed.*
*The patient visited her family physician a week later complaining of left chest pain on deep inspiration and shortness of breath on walking around 100 meters.*

Based on the above history, physical examination, and the CXR in figure 1, which one of the below diagnosis fits the condition of this lady :

☐ A. Muscular pain
☐ B. Pulmonary embolus
☐ C. Spontaneous pneumothorax
☐ D. Pneumonia

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## DISCUSSION

This patient had no physical signs suggestive of muscle spasm and the pain was not positional, which makes the diagnosis of muscular pain unlikely. She did not have symptoms or signs suggestive of pneumonia ; the respiratory rate was normal, no evidence of chills, fever and had no cough. Pulmonary embolus enters in the differential diagnosis ; the fact she is young and has no risk factors puts this possibility low in the list.

The CXR reveals loss of vascular markings along the left border of the lung (figure 2). The picture is compatible with moderate pneumothorax with slight shift of the mediastinal structure to the left.

Pneumothorax can be primary or secondary. In this case there are no predisposing factors like asthma, chronic obstructive lung disease (COPD), lung infection and other less common problems. Spontaneous primary pneumothorax though rare in women (6 cases per 100,000 population per year) mainly occurs in thin tall persons in their early twenties [1]. Spontaneous pneumothorax is sustained while the patient is at rest. Exam of the lung usually misses a pneumothorax that is less than 15 percent. In mild to moderate cases, spontaneous resolution is usually the case [1].

Unstable patients suffer from tachypnea (RR > 24/min), inability to complete a sentence, tachycardia or bradycardia (rate > 120/min and < 60/min), and room air saturation less than 90% [2]. Primary care physicians need to initiate emergency management if unstable pneumothorax is diagnosed. The treatment consists of introducing a needle or preferably a cannula in the second intercostal space in the midclavicular line. The needle/cannula should be kept in place till a chest tube is inserted. Control pain by analgesia like paracetamol and codeine. Once possible, supplement with oxygen and refer immediately to a specialist.

Recurrence of pneumothorax is possible. If this occurs, refer to a pulmonary specialist.

FIGURE 2

## REFERENCES


1. Sahn S, Hefner JE. Spontaneous pneumothorax. N Engl J Med 2000 ; 342 : 868-73.
2. An American College of Chest Physicians Delphi Consensus Statement Management of Spontaneous Pneumothorax. Chest 2001 ; 119 : 590-602.