

A young breathless patient

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Answers

Question 1

The chest x-ray (Figure 1) shows air density projected over the left upper mediastinum/pericardial region, which was reported as an unusual appearance. No subcutaneous emphysema or pneumothorax was seen. The chest x-ray appearances were suspicious for pneumomediastinum. Plain chest films with pneumomediastinum usually show lucent streaks or bubbles of air outlining or tracking around mediastinal structures.¹

Question 2

Causes of pneumomediastinum are broad. These include oesophageal rupture, trauma, operations and endoscopic procedures and underlying lung disease.¹ CT imaging should be used to identify if the condition is spontaneous or if an associated pathological entity exists, particularly when there is no trauma or obvious iatrogenic cause identified. Where there is suspicion

Table 1. The classic triad of signs and symptoms for spontaneous pneumomediastinum³

The classic triad – spontaneous pneumomediastinum
Chest pain
Dyspnoea
Subcutaneous emphysema

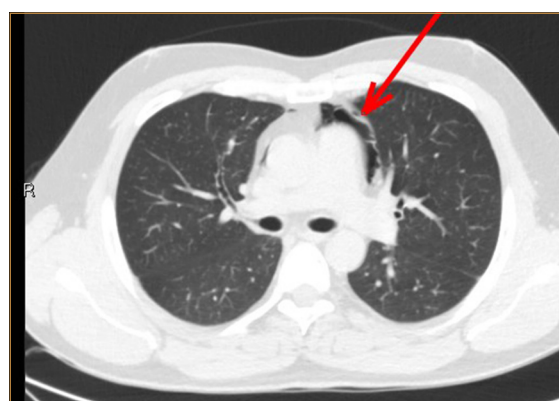


Figure 2. CT Chest

of spontaneous pneumomediastinum (SPM), and the 'classic triad' of signs and symptoms exist clinically and/or radiologically, CT imaging may be unnecessary.²

Our patient's CT is shown here (Figure 2). This confirmed pneumomediastinum. There is emphysema seen within the anterior mediastinum, as demonstrated by the arrow. No cause of this was identified. No air is seen near the oesophagus.

Question 3

SPM is defined as the presence of air in the mediastinum without obvious cause identified. It follows alveolar rupture, without pleural effraction, causing air to diffuse toward the peribronchial and perivascular tissue. It then tracks to the mediastinum by the existing pressure gradient.^{2,4} Figure 3 shows the likely tracking point into the mediastinum from the right lung.

Once associated pathologies that may require treatment have been excluded, these patients can be managed as outpatients. Management should be conservative and SPM resolves independently over one week. Only those with co-existing conditions, such as pneumothorax, require treatment. Recurrence rates appear low and therefore long term follow up is not required.^{2,5}

Conflict of Interest

Nothing to declare.

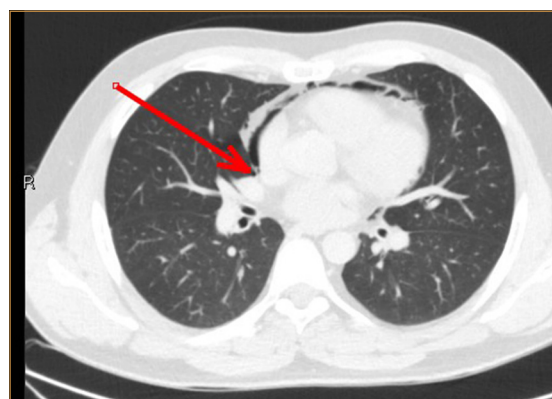


Figure 3. CT Chest

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