

Case 2

An 81-year-old woman presented to A/E with a history of recent onset of shortness of breath.

This had come on during dinner the previous evening and had not resolved.

She had asthma as a child, and cardiac bypass 5 years ago. Blood tests indicated a negative troponin and normal D-dimer. A CXR (Image 1) was performed.

Questions

1. What does the chest x-ray show?
Despite a normal D-dimer, a CTPA (Image 2a,b) was performed to exclude pulmonary embolism.
2. Is there evidence of thromboembolic disease on the given slices?
3. Is there any abnormality to explain the patient's symptoms?

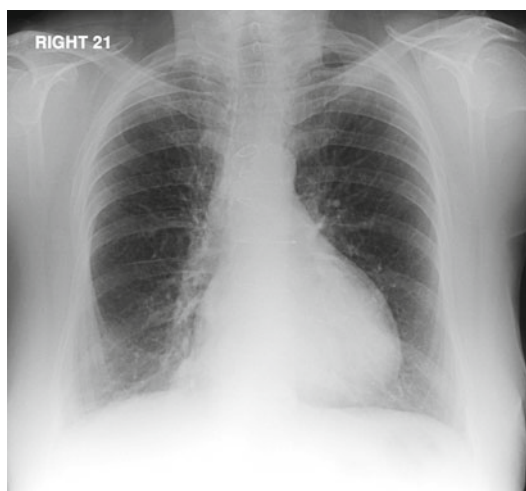


Image 1

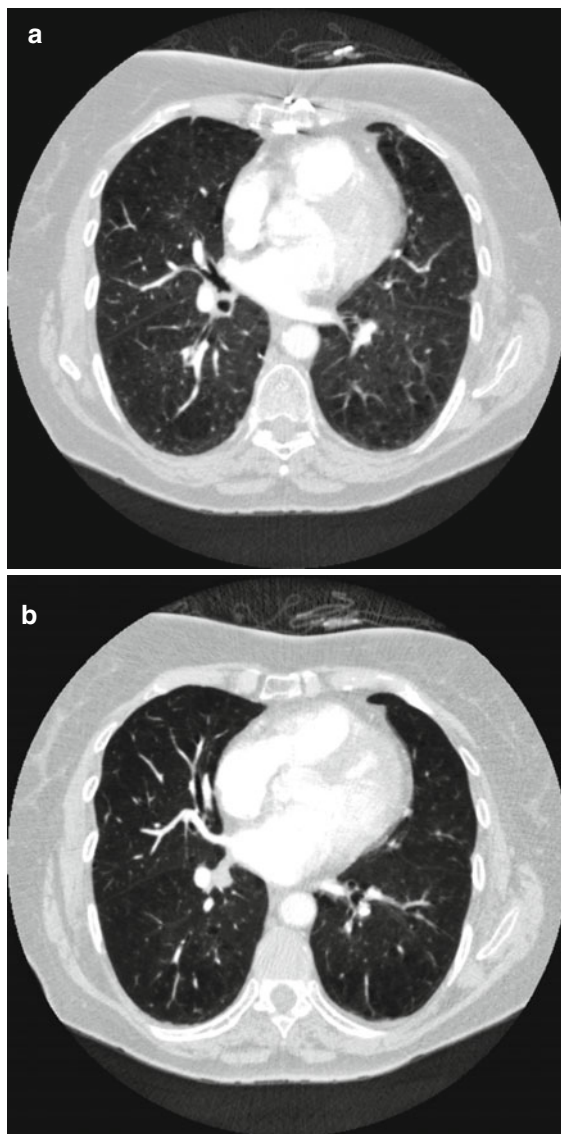


Image 2

Answers

1. The CXR shows evidence of previous cardiac surgery and smoking-related lung disease. There is no clear abnormality to explain the patient's symptoms.
2. There is no evidence of a PE on the given slices.
3. There is sudden complete infilling of a segmental bronchus on the right (*arrow* Image 3). This could represent a tumour or retained secretions, but given the clinical history, this could be consistent with an aspirated foreign body.

The patient subsequently coughed up a pea, and her breathlessness resolved. The abnormality is seen well on the coronal reconstruction (*arrow* Image 4) and the virtual bronchoscopy (*arrow* Image 5).

Virtual bronchoscopy takes advantage of multi-slice technology and the amount of information it obtains. The information acquired during the scan is processed to allow a 'fly through' of the bronchial tree as if from a bronchoscopy viewpoint. Note the patent airway to the right of the abnormality.

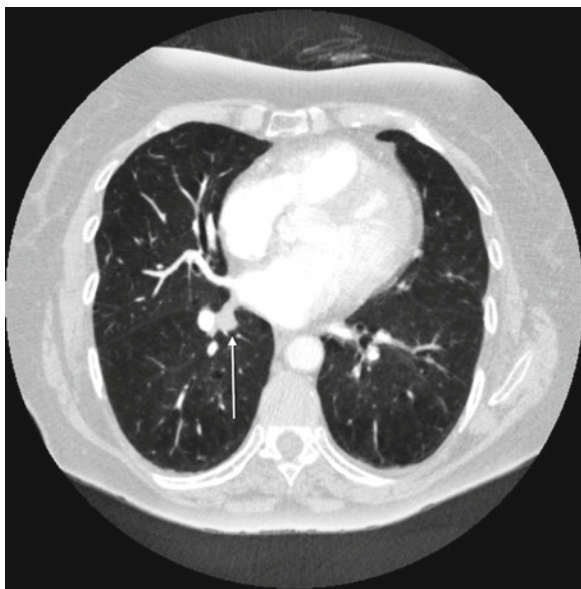


Image 3

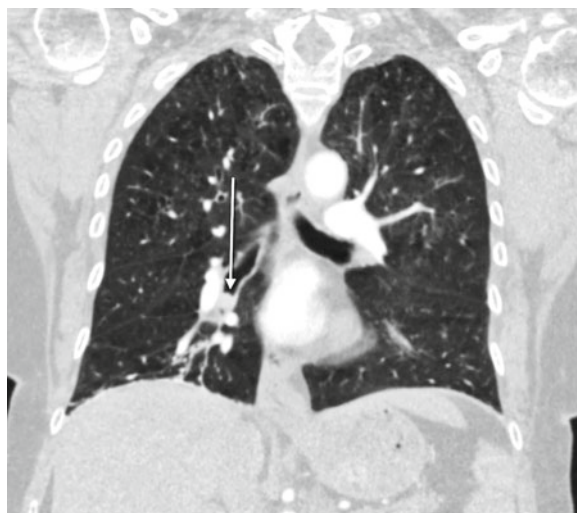


Image 4

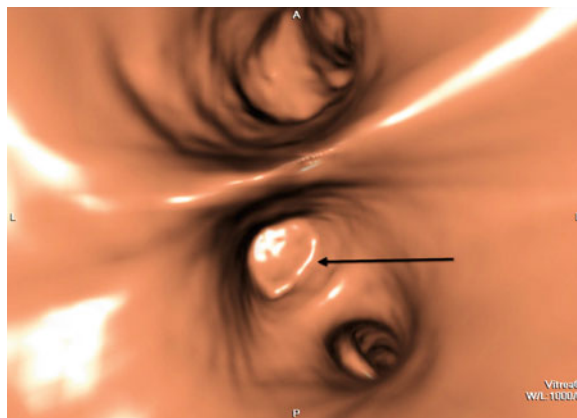


Image 5

Key Points

- › Aspiration occurs in adults as well as children.
- › Foreign bodies may cause obstruction and lung collapse, but may also not cause a discernable abnormality on CXR.
- › Cross-sectional imaging and modern multi-slice technology allowing virtual bronchoscopy may be very useful

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