

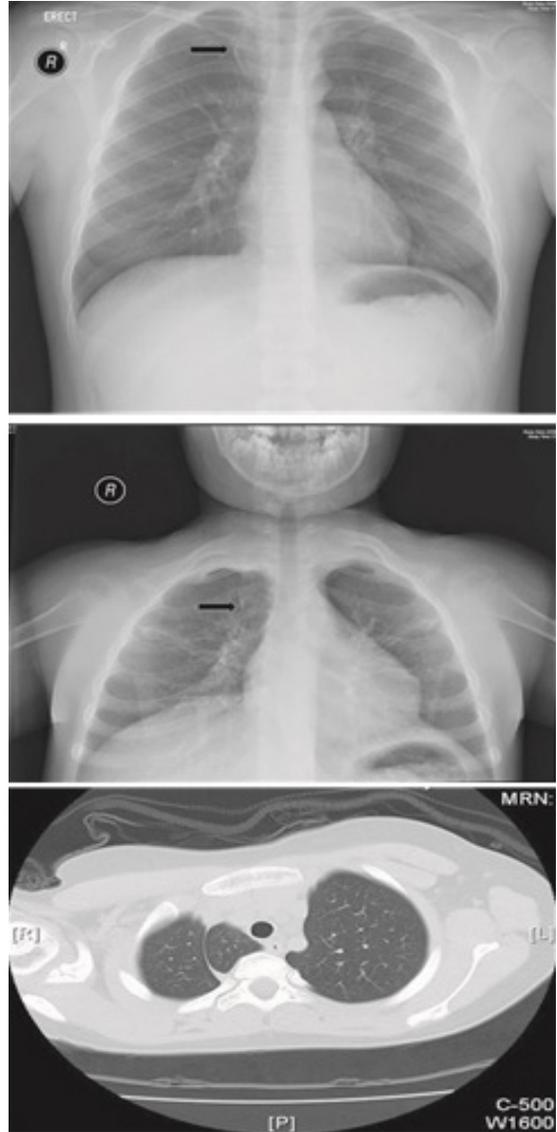
## Pulmonary Radiology Quiz

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### Case history

- A 10-year-old girl presented to outpatient department with protracted cough for over one month after an episode of upper respiratory tract infection which had been treated in outpatient clinic with symptomatic medications.
  - Chest X-ray was taken and an empirical course of antibiotics was given. Her cough improved but repeat chest X-rays showed persistent shadow.
  - Subsequently, her general physical examination was fair. On examination of respiratory system, there was no chest deformity and trachea was central. Air entry was symmetrical and there were no added sounds on chest auscultation. Other systems examination was normal.
1. What is the radiological appearance seen in the given X-rays?
  2. What is the differential diagnosis?
  3. In which other conditions do the chest X-ray appears normal?



Please refer page number 100 for the answer

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## Pulmonary Radiology Quiz - Answers

1. The chest X-rays show a curvilinear shadow, which is similar in shape to an inverted comma, represents the azygos fissure with the azygos vein lying inside, which is often described assuming a characteristic “tear-drop appearance”. Thoracic CT scan confirms the findings and the rest of the lungs are normal.
2.
  - a) Normal chest x-ray
  - b) Apical consolidation
  - c) Apical fibrosis
  - d) Lung mass
  - e) Pulmonary nodule
  - f) Lung abscess
3.
  - a) Shallow pneumothorax
  - b) Pneumocystis carinii pneumonia
  - c) Occult bronchogenic carcinoma
  - d) Minimal pleural effusion
  - e) Early stage of interstitial lung disease
  - f) Early stage of miliary tuberculosis

### Discussion

- The azygos lobe is a normal anatomical variant, resulting from partial segmentation of the normal right upper lobe by an abnormally placed azygos vein, whose arch splits the upper lobe. This creates an azygos fissure with the azygos vein wrapped by pleura hanging it to the apico-posterior wall of the thorax.
- Depending on the way of medial sliding of the azygos vein development, the azygos fissure could adopt a vertical to more or less horizontal position.
- Reported incidence of azygos lobe varies from 0.1-1.1% in autopsy series and 0.01-2.6% in radiological series. It is more frequent on the right side but a few cases have been reported on the left side or on both sides.

- The azygos lobe itself usually causes no pathology but it may be confused with a pathological air space such as abscess or bulla. A consolidated azygos lobe may be confused with a lung mass and the abnormally located azygos vein may be mistaken as a pulmonary nodule.
- Some cases of azygos lobe have been reported to be associated with abnormal position of great veins in the superior mediastinum e.g. anomalous brachiocephalic vein, superior vena cava or with other congenital abnormalities e.g. congenital lobar emphysema, pulmonary sequestration, oesophageal atresia.
- Rarely, malignancies have been described in adults arising from azygos lobe

### Clinical significance

- Azygos lobe as such is not associated with any morbidity but can cause technical problems in thoracoscopic procedures to the surgeons because of injury to the veins due to their anomalous position.
- Consolidation may confine to upper lobe or segment.

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