A 10-year-old girl presented to Accident & Emergency Department with protracted cough for over one month after an episode of upper respiratory tract infection which had been treated in out-patient 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 (arrow) amongst clearing up chest infection changes. She was referred for further respiratory assessment. On physical examination she was pink, afebrile, with normal growth and no finger clubbing. There was no chest deformity and trachea was central. Air entry was symmetrical and there were no added sounds on chest auscultation. Cardiovascular, abdominal and ENT examination were unremarkable.

**Question**
What is the radiological diagnosis?

*(Answer on pages 28-29)*
Answers to X-ray Quiz on page 26

The chest X-rays showed azygos lobe in the right lung apex. The 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.

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, creating 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.\textsuperscript{1,3}

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.\textsuperscript{2} 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,\textsuperscript{4} superior vena cava\textsuperscript{5} or with other congenital abnormalities e.g. congenital lobar emphysema,\textsuperscript{6} pulmonary sequestration,\textsuperscript{7} oesophageal atresia.\textsuperscript{8} Rarely, malignancies have been described in adults arising from azygos lobe.\textsuperscript{9-11} Interestingly, there have been case reports of vanishing azygos lobe and/or migratory azygos vein, which are thought to indicate occurrence of previous pneumothorax or associated with kyphosis.\textsuperscript{12-16}

Presence of azygos lobe should be alerted to cardiothoracic surgeons as it may confound certain surgical approaches or causing potential problems during operations.\textsuperscript{8,17,18}
References