A 60-year-old woman with interstitial lung disease was reviewed in clinic three weeks after undergoing a right lower lobe lung biopsy via video-assisted thoracoscopic surgery. Chest imaging studies had revealed bilateral reticular markings with peripheral and lower lung zone predominance. The pathology documented constrictive bronchiolitis and a usual interstitial pneumonia (UIP)-type fibrosing interstitial pneumonia. The patient described modest worsening of dyspnea on exertion and discomfort in her right-lower chest following her surgery; she attributed this to expected sequelae of surgery.

The initial chest radiograph revealed lung markings extending to the chest wall, but increased radiolucency in the right base compared with previous. Shift of the heart to the left, depression of the right hemidiaphragm and an apparent prominent right hilum were also seen (Figure 1). On bedside right-sided chest ultrasonographic examination, positive sliding pleural and seashore signs were elicited anteriorly; posterior examination was significant for negative sliding pleural and positive barcode signs (1) (Figures 2 and 3, Videos 1 and 2 [click on the camera icons in the video legends on this page]). A computed tomography scan of the chest confirmed the diagnosis of a large, posterior right-sided pneumothorax (Figure 4).

The patient was admitted to hospital and a chest tube was inserted. Her hospital admission was prolonged due to a persistent air leak. Following drainage of the pneumothorax, subsequent chest radiographs showed re-expansion of the right lung (Figure 5).
KEY LEARNING POINTS

1. The decrease in right lower lung markings and new hyperinflation of the right hemithorax with slight left shift of the cardiac shadow and depressed right hemidiaphragm suggest the diagnosis of pneumothorax. As in our case, a prominent hilum corresponding to a collapsed right lower lobe may also be apparent.

2. Fibrotic or inflammatory changes related to interstitial lung disease may lead to unusual locations of pneumothoraces via pleural adhesion to the chest wall (2).

REFERENCES


The ‘Images in Respiratory Medicine’ section of the Canadian Respiratory Journal aims to highlight the importance of visual interpretation, whether physiological, radiological, bronchoscopic, surgical/thorascopic or histological, in the diagnosis of chest diseases. Submissions should exemplify a classic, particularly dramatic or intriguing presentation of a disease while offering an important educational message to the reader (insightful diagnostic pearls or differential diagnosis, etc.). This section is not intended to be a vehicle for publication of case reports (see the Clinical-Pathologic Conferences for case-based leaning series).