Non-traumatic herniation of the liver in an asthmatic patient

Sir,

Diaphragmatic hernias are commonly classified as congenital or acquired (traumatic and non-traumatic). Non-traumatic herniation into the thoracic cavity containing the liver is extremely rare with only six cases documented so far.[1-4] In view of the rarity of the lesion and its likely confusion with other causes of a pulmonary nodule including a malignancy, we present a case of non-traumatic herniation of the liver diagnosed in a 57-year-old female patient.

The patient was on treatment for severe bronchial asthma and underwent a computed tomography of chest for suspected coexistent bronchiectasis. While conforming bronchiectasis, the scan also showed a well-defined, non-calcified round opacity of uniform soft tissue density, about 4 cm in diameter, in the right lower zone adjacent to the right diaphragm situated in the posterior basal segment [Figure 1]. Suspecting a malignancy, a CT-guided fine needle aspiration cytology (FNAC) was performed that revealed cohesive clusters of epithelial cells with increased nuclear-cytoplasmic ratio, single prominent central nucleolus and mild nuclear pleomorphism. The cells were large, polygonal with an abundant vacuolated and finely granular cytoplasm with lipofuscin pigment. The cells were PAS positive and diastase-negative indicating the hepatic origin of the lesion. Thus, ruling out a malignancy, a diagnosis of liver herniation was made. On CT, 1 mm cuts were obtained that showed the lower end of the opacity to be continuous with the right diaphragm with a small gap in the latter [Figure 2]. No active intervention was deemed necessary. Three years later, a repeat scan showed considerable reduction in the size of the lesion [Figure 3].

In the present case, the diagnosis was established on CT by the location of the opacity and the visualization of a rent in the diaphragm, and the histopathological features of a normal liver cytology. A thoracotomy was thus avoided. None of the other reported cases were followed up to determine the course of the lesion. Reduction in size after three years in the present case shows that the hernia may undergo spontaneous regression. Thus, a diagnosis of liver herniation should be considered in the differential diagnosis of an intrathoracic opacity in the

Figure 1: Computed tomogram of lung showing a well-defined, non-calcified round opacity of uniform soft tissue density in the right lower lobe

Figure 2: Computed tomogram of lung showing the lower end of the opacity to be continuous with the right diaphragm with a small gap in the latter

Figure 3: Computed tomogram of lung showing a decrease in the size of the opacity after 3 years
lower lobes of the lungs, especially if it is in contact with the diaphragm, along with primary lung, pleural and diaphragmatic neoplasms as well as metastases and other non-neoplastic causes. A noninvasive imaging modality such as a CT scan with FNAC should establish the correct diagnosis and more invasive procedures like diagnostic pneumoperitoneum and an exploratory thoracotomy should seldom be required.

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References