Posterior mediastinal mass: Unraveling a non-traumatic herniation of the caudate lobe of the liver

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INTRODUCTION

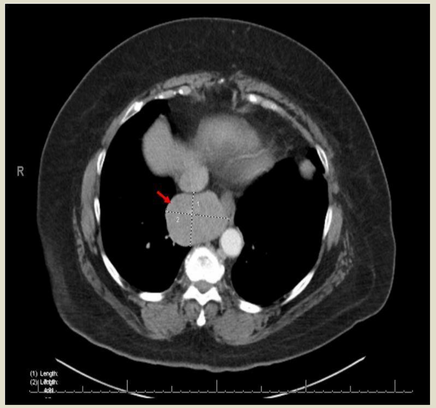
A posterior mediastinal mass is most likely due to neurogenic tumor, meningocele or thoracic spine lesions. Caudate lobe of the liver herniation presenting as posterior mediastinal mass is a rare occurrence. Diaphragmatic herniation of the caudate lobe presents in various way including dyspnea, dyspepsia or can be an incidental finding on imaging [1]. We present a case of diaphragmatic herniation of the caudate lobe of the liver presenting as a posterior mediastinal mass found during evaluation of dyspnea.

CASE PRESENTATION

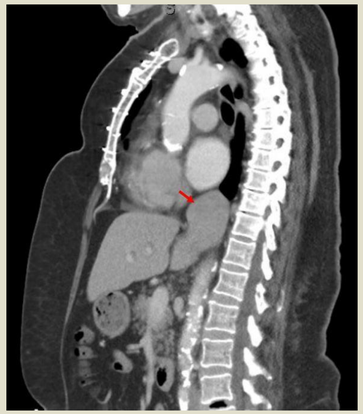
A 75-year-old female presented to the her physician's office with worsening shortness of breath from her baseline of 3 days duration. She had a history of sarcoidosis, COVID pneumonia over 1 year ago, chronic obstructive pulmonary disease, heart failure with preserved ejection fraction, and essential hypertension. She was initially evaluated for COVID re-infection, which was negative and a Computed Tomography (CT) of the chest to check for sarcoidosis flare was obtained. The CT chest without contrast revealed posterior mediastinal mass measuring 4.5x6.5x6.4 cm. Hence, further work up with CT chest, abdomen and pelvis with contrast was obtained which revealed that the posterior mediastinal mass had similar attenuation as the liver and appears continuous with the caudate lobe of the liver. Confirmation with nuclear medicine (NM) scan was recommended. NM scan of liver was performed which confirmed the finding. Review of her records from an outside organization revealed similar finding on imaging a few years ago. Patient denied any history of trauma and laboratory work up revealed normal liver functions. After pulmonologist evaluation she was started on 2 L home oxygen following six-minute walk test, and also CPAP following a positive sleep study. Pulmonary function tests were performed and inhalers were continued. Given the chronicity of her symptoms and co-morbidities with stable caudate lobe herniation, conservative management was advised with surgery warranted if symptoms persist despite treatment.

Images

Computed Tomography of chest with contrast (axial view) showing a well-defined soft tissue density lesion in the posterior mediastinum (red arrow) measuring 7.1 x 4.9 cm in size.



Computed Tomography of the chest, abdomen and pelvis with contrast (sagittal view) showing well defined soft tissue mass in the posterior mediastinum (red arrow) similar in attenuation to the adjacent liver and appears continuous with the caudate lobe of liver



DISCUSSION

Diaphragmatic herniation is usually found on the left side with contents including stomach, colon or small bowel; the right side is usually guarded by the liver. Isolated herniation of part of the liver into the thoracic cavity is rarely reported and is mostly acute from traumatic or spontaneous rupture requiring immediate repair [2]. Our patient was initially evaluated for the posterior mediastinal mass for concerns of tumor, followed by the finding of what was thought to be acute herniation of the caudate lobe of liver into the thoracic cavity. Review of records showed this to be a stable lesion, we suspect that the patient had congenital diaphragmatic defect. Chronic and stable liver herniation into thoracic cavity can be managed conservatively if uncomplicated. Surgery may be warranted if it causes troubling symptoms.

Learning Points

- Differential diagnosis of posterior mediastinal mass include tumor, meningocele, spine lesions and in rare occasion herniation of part of liver.
- Herniation of part of liver needs to be evaluated for acuity, as acute herniation of liver is a surgical emergency
- Chronic herniation can be managed conservatively unless it is causes distressing symptoms including dyspnea, dyspepsia

REFERENCES

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