Congenital cyst in a rare localisation

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DESCRIPTION

A 19-year-old female patient was admitted to our hospital with right-sided chest pain and shortness of breath. Physical examination was unremarkable and the results of all laboratory studies were within normal limits. Chest computed tomography (CT) revealed an 8×4 cm homogeneous oval mass in the range of water attenuation (12 HU) in the upper dome area of the liver adjacent to the diaphragm. Magnetic resonance imaging (MRI) was performed in order to evaluate the extent of the lesion and details of the internal structure. The lesion showed low signal intensity on T1-weighted MRI and homogeneous high signal intensity on T2-weighted images, without septation or any mural nodule (figure 1). The patient underwent muscle-sparing thoracotomy and cystic lesion was excised totally (figure 2). Microscopically, the cyst is composed of homogeneous mesothelial cells. The patient was discharged on the fifth day of the operation and showed no evidence of recurrence at follow-up.

Diaphragmatic mesothelial cysts are rare congenital lesions arise from coelomic remnants. Thin walled, bilobulated cystic lesion in the posterolateral aspect of the right costophrenic angle is very suggestive finding for diagnosis. In our case, the cyst was extending throughout the right hemidiaphragm. The cyst cavity tends to contain a watery fluid similar to transudates. Majority of cases are asymptomatic, but common symptoms include chest discomfort, tightness, aching or pain caused by compression of the coronary artery or cyst rotation.

Difficulty in identifying their exact anatomic location, they could be misdiagnosed like a similar, hydatid cyst, bronchogenic cysts, teratoma or other cystic lesions. High mucin content of bronchogenic cysts, associated other tissue elements in teratoma are valuable findings in differential radiological diagnosis. Hydatid cyst of diaphragm is also rare and has various radiological appearance. Sometimes it should be difficult to distinguish these two entities, as in our case.

Akinci et al suggested conservative management with periodic follow-up with ultrasonography. Estaun et al reported spontan resolution in two of their four cases during follow up. If treatment is needed, aspiration and percutaneous ethanol sclerotherapy should be first choice of technique. Especially video-assisted thoracoscopic surgery may be suitable for these cysts. We performed muscle spare thoracotomy in our case because of the suspicion of hydatid cyst.

Figure 1  MRI findings of diaphragmatic mesothelial cyst. T2 weighted coronal (A) and sagittal (B) images show hyperintense, thin walled, homogenous cystic lesion adjacent to the right hemidiaphragm.

Figure 2  The cystic lesion was totally excised.
**Learning points**

- Diaphragmatic mesotelial cysts are rare congenital lesions.
- Owing to the difficulty of identifying their exact anatomic location, they may be misdiagnosed like a similar, hydatid cyst, bronchogenic cysts, teratoma or other cystic lesions. Thin walled, bilobulated cystic appearance in the posterolateral aspect of the right costophrenic angle is very suggestive finding for diagnosis.
- Conservative management with periodic follow up with ultrasonography is recommended. If treatment is needed aspiration and percutaneous ethanol sclerotherapy or video-assisted thoracoscopic surgery may be suitable for these cysts.

**Contributors** MO was involved in diagnosis, treatment and operation. GS was involved in diagnosis, treatment, and operation. SO was involved in the diagnosis and writing.

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**REFERENCES**