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CILIATED HEPATIC FOREGUT CYST: A RADIOLOGIC CASE REPORT WITH LITERATURE REVIEW

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ABSTRACT

Ciliated hepatic foregut cysts (CHFCs) are rare, benign cystic lesions of embryologic origin, most often discovered incidentally. We report the case of a 35-year-old woman in whom a hepatic cyst was identified on imaging. Magnetic resonance imaging (MRI) enabled detailed characterization of the lesion, suggesting a CHFC. We discuss the radiologic features of this rare entity.

KEYWORDS

Ciliatex hepatic foregut cysts,

MAIN ARTICLE

Introduction

Ciliated hepatic foregut cysts (CHFCs) are rare congenital cystic lesions, accounting for less than 0.01% of all hepatic cysts. Derived from the embryonic foregut, they are lined by pseudostratified ciliated respiratory epithelium, which histologically distinguishes them from other hepatic cystic lesions. Although typically benign, malignant transformation has been reported in some cases. Diagnosis relies on imaging and histopathological examination. We present a typical case of CHFC, highlighting the role of various imaging modalities.

Results

We report the case of a 35-year-old woman with no significant past medical history, in whom a hepatic lesion was incidentally discovered during an abdominal workup.

The patient was asymptomatic. Physical examination revealed no signs of liver disease. Liver function tests were entirely normal, and tumor markers (AFP, CA 19-9, CEA) were within reference ranges

Discussion

The ciliated hepatic foregut cyst (CHFC) is a rare cystic lesion of the liver, embryologically derived from the anterior foregut. First described by Wheeler and Edmondson in 1984, it represents a developmental anomaly in which a fragment of the foregut—normally destined to form tracheobronchial or esophageal structures—persists within the hepatic parenchyma [1,2].

This is a rare entity, with fewer than 150 cases reported in the literature to date [3]. It predominantly affects young to middle-aged adults, with a slight male predominance in some series. Most cases are discovered incidentally during imaging performed for unrelated reasons, as was the case for our patient.

Clinically, patients are most often asymptomatic. When present, symptoms are nonspecific: abdominal pain, right subcostal discomfort, nausea, or a palpable mass in the case of a large cyst [4].

Imaging plays a crucial role in the detection and characterization of CHFC.

Ultrasound

On ultrasound, CHFC typically appears as a well-defined, anechoic cystic lesion without mural nodules or internal septations. However, if the cyst contains mucinous or proteinaceous material, internal echoes may be present, complicating interpretation [5].

Computed Tomography (CT)

On CT, CHFC appears as a hypodense, non-enhancing lesion, often located in segment IV of the liver in a subcapsular position. The cyst wall is usually thin and regular [6].

Magnetic Resonance Imaging (MRI)

MRI is the most informative modality for lesion characterization:

Marked T2 hyperintensity, due to the fluid content.

Variable T1 signal, depending on the presence of proteinaceous or mucinous material.

No post-gadolinium enhancement, helping to rule out cystic tumors such as cystadenoma or cystadenocarcinoma.

No communication with the biliary tree on MRCP sequences, which helps exclude congenital biliary cysts.

In our case, MRI sequences revealed a typical cyst: hyperintense on T2, without enhancement, and with non-restrictive diffusion hypersignal—features consistent with a CHFC.

Conclusion

Ciliated hepatic foregut cysts (CHFCs) are rare, benign, and embryologically derived cystic liver lesions, most often detected incidentally. In the case presented, MRI played a key role in accurately characterizing the lesion, with imaging features highly suggestive of CHFC. Recognizing the typical radiologic appearance is essential to avoid unnecessary interventions and to differentiate CHFCs from other cystic hepatic pathologies.

FIGURES:

Figure 1 :

Axial T2-weighted liver MRI: well-defined hyperintense cystic lesion with a dependent, spherical area of intermediate homogeneous signal, measuring approximately 2 cm, located in hepatic segment IV. No solid component or mural thickening is seen, consistent with a benign cyst.

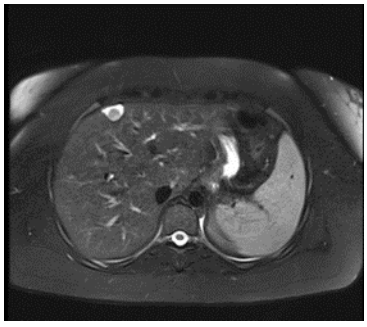


Figure 2 :

Axial diffusion-weighted liver MRI (DWI): the cyst appears hyperintense on diffusion sequences, likely due to a T2 shine-through effect. No significant diffusion restriction is observed on the ADC map, consistent with a benign cystic lesion.

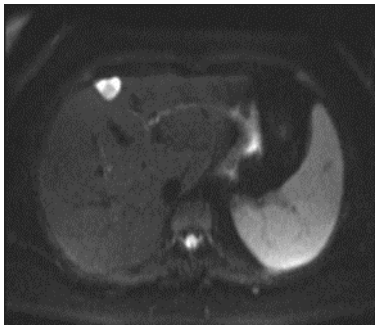
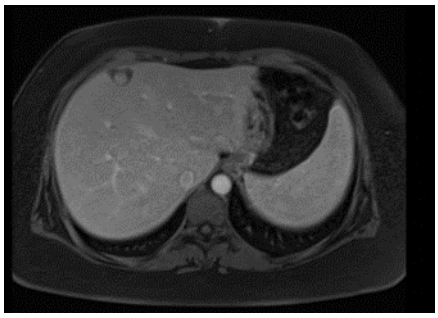


Figure 3 :

Axial T1-weighted liver MRI after gadolinium injection (portal phase): the cyst remains hypointense, with no mural or septal enhancement, arguing against cystadenoma or malignant processes.



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