

Are They Just Simple Liver Cysts? Unveiling the Complexities of Cystic Liver Lesions

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Objective

Simple liver cysts are the most common cystic lesions in the liver, typically requiring no treatment or follow-up. However, there are alternative cystic lesions and mimickers that can complicate diagnosis. Non-typical cysts must be meticulously analysed to prevent misdiagnosis of lesions that may necessitate further management. This poster aims to elucidate the imaging features of these alternative liver cystic lesions and their mimickers.

Materials & Methods

Retrospective review of patients with cystic liver lesions and mimickers underwent radiological investigation in our institution between the period of 2019 to 2024. A pictorial review of the pertinent imaging characteristics with multimodality was performed.

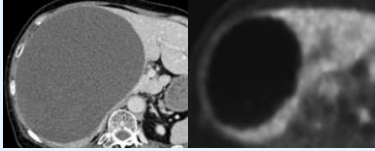
Mucinous Cystic Neoplasm of Liver (MCN-L) (Previously known as Biliary Cystadenoma)

72/F presented with distending abdominal discomfort. US and CT showed solitary large-sized (24cm) cystic lesion with multiple thick internal septa without enhancing solid components. This lesion has progressively enlarged over 3 years. Patient underwent hepatectomy and pathology confirmed biliary cystadenoma.

US showing thick internal septa. ▼



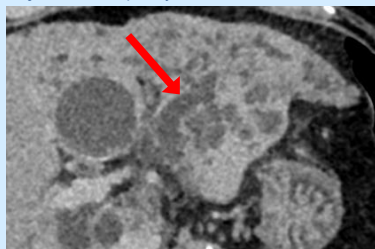
Non-FDG avid on PET-CT (axial) ▼



Caroli Disease

70/F with numerous cystic lesions of varying sizes in both lobes of liver, almost replacing the left lobe liver with left intrahepatic ductal dilatation. Patient underwent operation and pathology confirmed polycystic change compatible with Caroli disease.

Contrast-enhanced CT (axial) showing dilated left intrahepatic duct (red arrow) and adjacent multiple cystic lesions. ▼



65/M with MRCP showing saccular dilatation of intrahepatic ducts mimicking cluster of liver cystic lesions. Features suspect Caroli disease.

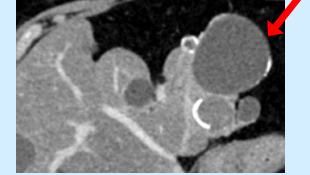
MRI T2-weighted (coronal) ▼



Liver Hydatid Cysts

70/F with multiple liver cystic lesions; some cysts showing thick wall with rim calcification and daughter cyst formation. Features suspect hydatid cysts of the liver.

Contrast-enhanced CT (axial) ▼



Double Gallbladder

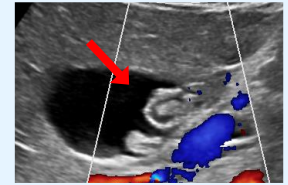
61/F with incidental finding of a cystic lesion at liver segment 4b, abutting the native gallbladder.

US and CT show several internal calcified densities within this cystic lesion (red arrow), which are later confirmed to be gallstones.

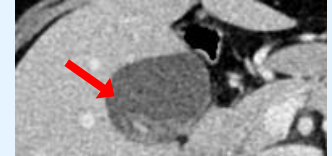
MRI with delay cholangiogram shows biliary excretion into both the cystic lesion and native gallbladder.

Patient underwent operation and confirmed it being an accessory gallbladder.

US showing mobile echogenic densities. ▼

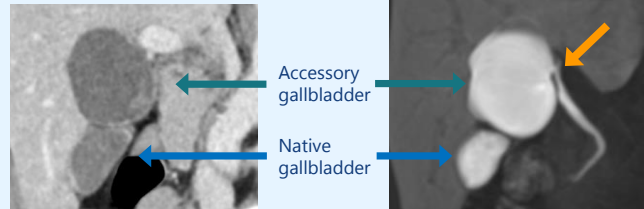


Contrast-enhanced CT (axial) showing non-enhancing gallstones. ▼



MRI with delay cholangiogram showing the cystic lesion has its own duct (orange arrow) connecting to biliary tree. ▼

Contrast-enhanced CT (coronal) ▼



Conclusion

Cystic liver lesions and their mimickers exhibit a wide array of features. Careful characterisation of these lesions — through analysis of wall thickness, presence of enhanced septa or solid components, and interval growth — is essential. A comprehensive understanding of the relevant imaging patterns is critical for achieving an accurate diagnosis for patient management.

Reference:

- Vachha, B., Sun, M. R. M., Siewert, B., & Eisenberg, R. L. (2011). Cystic lesions of the liver. *American Journal of Roentgenology*, 196(4), W355–W366. <https://doi.org/10.2214/ajr.10.5292>.
- Chenin, M., Paisant, A., Lebigot, J., Bazeries, P., Debbi, K., Ronot, M., Laurent, V., & Aubé, C. (2022). Cystic liver lesions: a pictorial review. *Insights Into Imaging*, 13(1). <https://doi.org/10.1186/s13244-022-01242-33>.