

Unexpected cyst within ascites

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A 59-year-old man, with known alcohol-induced liver cirrhosis and diuretic refractory ascites, was seen in General Internal Medicine clinic for a therapeutic paracentesis. The tense large volume ascites caused abdominal pain, which had been previously relieved with paracentesis on several occasions. In preparation for paracentesis, routine point-of-care ultrasound (POCUS) was performed to landmark for the procedure. POCUS revealed an unexpected thin-walled mobile structure (Figure 1) within the abdominal cavity (online Video S1). There was no history of abdominal surgery, or any indwelling catheters.

Intraabdominal cysts are classified based on their organ of origin. This particular cyst appears adjacent to mesentery or omentum. The most common mesenteric or omental cysts are lymphangiomas, which are multiseptated structures [1]. Less common are thick walled enteric duplication cysts, hypoechoic enteric cysts, and thin anechoic unilocular mesothelial cysts [1]. Pathologic examination is required for definitive diagnosis.

POCUS imaging characteristics in this case were consistent with a mobile benign mesothelial cyst. Benign mesothelial cysts are a relatively rare tumor, within the category of multilocular peritoneal inclusion cysts [2,3]. These cysts are generally tethered to organs, but a small subset is non-tethered and can be free floating in the presence of ascites [2,3]. They are often found incidentally, in reproductive age women during caesarian sections, or during abdominal imaging.

These thin-walled and fluid-filled structures are typically three to ten centimeters in diameter [4]. When examined histologically, the cyst walls are fibroconnective tissue with flattened to cuboid mesothelial cell layers without any mitotic activity [5]. While the pathophysiology remains unknown, there may be a link to peritoneal inflammation or elevated estrogen states [2,5]. End stage liver cirrhosis would cause both a pro-inflammatory state and elevated estrogen levels.

While these cysts are commonly asymptomatic, they can cause abdominal pain and compressive symptoms if large. Management is complete surgical resection, although there is a propensity for recurrence.

This patient underwent an effective therapeutic paracen-

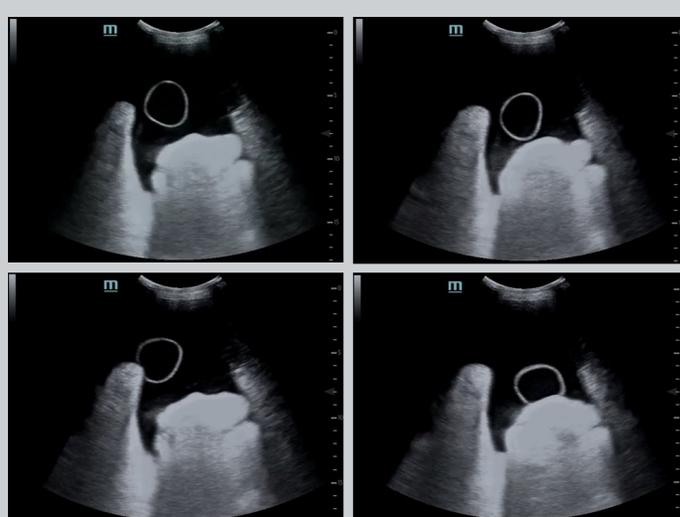


Figure 1. Point of Care Ultrasound of Right Lower Abdominal Quadrant. Four still images captured from the 6 seconds of video recording.

tesis, avoiding the cystic structure. Unfortunately, shortly after these images were obtained, he deteriorated due to progression of his decompensated liver cirrhosis, and subsequently passed away. In keeping with his goals of care, repeat therapeutic paracentesis was performed to help relieve abdominal pain, but no further investigations were performed on this cyst.

References:

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