New Onset Budd-Chiari Syndrome Caused by an Abnormally Large Liver Cyst

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Introduction

- Simple liver cysts are one of the most common incidental findings on imaging studies.
- It is estimated that liver cysts occur in approximately 2.5% of the population, with a slight female predominance.
- Most of them are asymptomatic and usually do not cause any problems.
- However, continued cyst growth can lead to mass effect, increasing the risk for Budd-Chiari syndrome (BCS).
- BCS is caused by obstruction of hepatic venous outflow and is the leading cause of post-sinusoidal liver failure.
- We present the case of a patient with BCS caused by an abnormally large liver cyst.

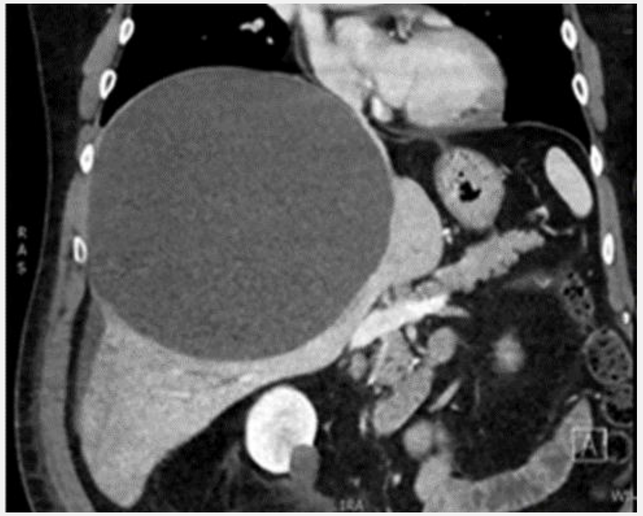


Image 1: First panel shows a coronal view of the liver cyst compared to liver parenchyma.

Case Presentation

- The patient is a 71-year-old Hispanic male with past medical history significant for a simple hepatic cyst, discovered in 2016.
- The lesion had remained stable at 10 cm as of 2019.
- Patient presented to the ED in 2021 with a chief complaint of worsening, bilateral, lower extremity edema, that extended to the abdomen.
- CT abdomen/pelvis revealed enlargement of the cyst to 23 x 18 cm, with compression of the IVC causing secondary Budd-Chiari syndrome.
- Serum Echinococcus antibodies were obtained and resulted negative prior to intervention.
- Patient underwent a laparoscopic fenestration and partial liver cystectomy, by the General Surgery Service.
- Cytology obtained on the cyst was without evidence of malignancy, and fungal/bacterial cultures grew no organisms.
- Serum hepatitis, Strongyloides, Schistosoma, HIV, and Entamoeba antibodies resulted negative.
- Patient was discharged home without further complications.

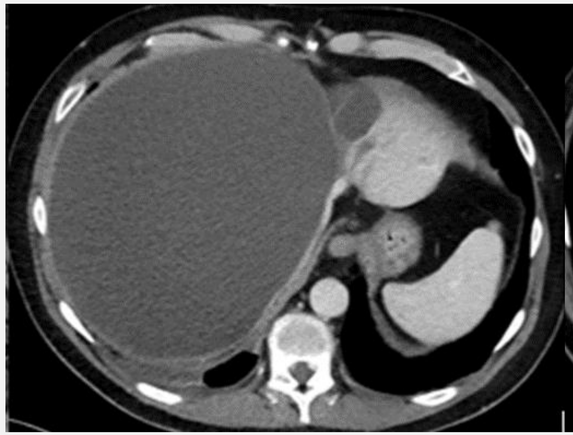
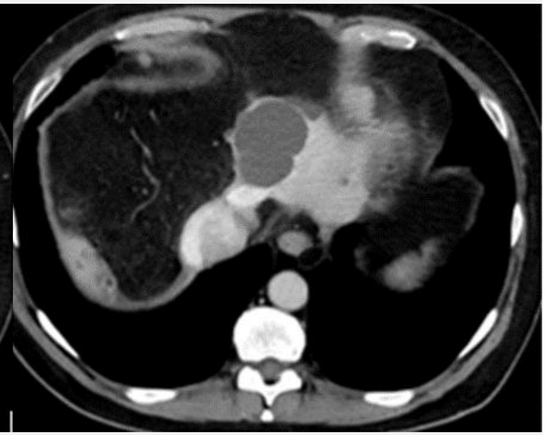


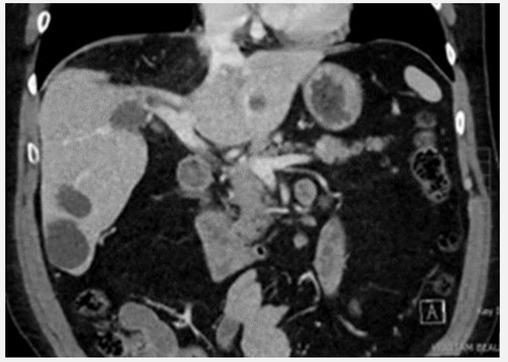
Image 2: Demonstrates a transverse view of the liver cyst with concomitant compression of the hepatic vasculature.



Images 3: Demonstrates post-surgery changes and decompression of hepatic vasculature.

Discussion

- Simple liver cysts are saccular fluid filled structures that usually do not have septations or calcifications, and usually do not enhance with intravenous contrast.
- The diagnosis is usually established by clinical presentation and imaging.
- Ultrasound can be used for initial evaluation of the cyst, but magnetic resonance is recommended for further characterization.
- Percutaneous needle aspiration can be performed, with or without the usage of sclerosing agents, but this method is associated with a high recurrence rate.
- Although uncommon, BCS can be acute and lead to fulminant liver failure.
- Abdominal pain, in the setting of a history of a known liver cysts should be taken seriously, since complications, including peritoneal infection, anaphylaxis, hemorrhage and acute liver failure can be catastrophic.



Images 4: Demonstrates post-surgery changes and decompression of hepatic vasculature.

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