



TUMEFACTIVE SLUDGE PRESENTING AS GB MASS - A CASE REPORT

General Surgery

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ABSTRACT

Tumefactive sludge in gall bladder can cause diagnostic dilemma. A patient presented with large vascular echogenic mass in gall bladder and a gallstone on ultrasonography. MRCP favored it to be a benign mass due to sludge. Laparoscopic Cholecystectomy was done carefully preventing any spillage. Histopathology confirmed the diagnosis of chronic calculus cholecystitis with no evidence of malignancy.

KEYWORDS

tumefactive sludge, GB sludge, GB mass, lap. cholecystectomy.

Introduction:

Gallbladder sludge (also known as biliary sand, biliary sediment or thick bile) is a mixture of particulate matter and bile, presents as a layering slowly mobile dependent fluid-fluid level on ultrasound in 6.0% patients (1).

Tumefactive gall bladder sludge is most commonly encountered as an incidental finding (0.1%) on ultrasound evaluation for right upper quadrant pain (2). It presents as an intraluminal polypoid, echogenic, non-shadowing mass which may mimic a tumor.⁴

Clinical and imaging differences exist between benign and malignant tumefactive sludge.

CASE REPORT:

A 62 years old patient presented as a case of chronic calculus cholecystitis. On Ultrasonography, Gall bladder lumen was found filled with vascular echogenic mass with calculi.

On MRCP with IV contrast, gall bladder was distended with 38mm X18mm soft tissue mass /sludge along with 9mm calculus. Gall bladder wall was only 3mm thick with intact facial planes. Liver didn't show any focal lesion. LFT and other routine tests were normal. Laparoscopic cholecystectomy was done. The specimen was delivered out in a bag without any spillage. Gross pathology and histology confirmed it to be sludge appearing like tumor mass with no evidence of malignancy.

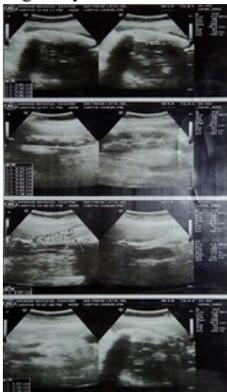


Fig.1: USG Whole abdomen



Fig.2: GB cut open

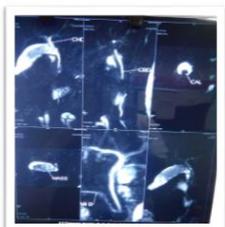


Fig.3: MRCP image of tumefactive sludge

Discussion:

Biliary sludge represents highly viscous bile with high bilirubin content. It is usually the result of biliary stasis from prolonged fasting or hyperalimentation. Tumefactive sludge is typically associated with cholelithiasis, and evolution of tumefactive sludge to calcium bilirubinate stones has been described.³

Tumefactive sludge is identified according to the following US findings:

- Non movable mass-like lesion
- Absence of posterior acoustic shadowing at B-mode US and
- Vascularity at color Doppler US.

CT is limited as a primary evaluation tool for sludge with a sensitivity between 44-64%.⁶ Biliary sludge on CT can appear as layering increased density in the gallbladder or as a tumefactive soft tissue nonenhancing attenuation mass (>25HU). However vicarious excretion of iodinated contrast may confound evaluation for enhancement.⁶

On MR biliary / tumefactive sludge in general has been described as iso- to mildly hyper intense on T2 weighted images and hyper intense on T1 weighted images. The T1 hyper intensity results from water resorption and concentration of cholesterol and bile salts during fasting.⁵

Laparoscopic cholecystectomy should be performed for symptomatic, persistent, enlarging sludge or with gallstone. The specimen must be delivered in a bag without any spillage to avoid a possibility of tumor implant in the port in case of malignancy.

Conclusion:

Prevalence of tumefactive sludge at Ultrasound is rare (2). The key features separating the benign from malignant sludge are demonstration of tumefactive sludge as a mobile mass with no internal vascularity. Unfortunately, this is not always possible, as sludge can be adherent to the wall or move very slowly; the lack of vascularity alone is not sufficient to effectively exclude tumor, especially with small masses. Careful follow-up is essential, especially for older patients, women, and those with an absence of hyperechoic spots at US.

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