

## Mucinous Cystadenoma of Gall Bladder: A Rare Entity

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### 1. Abstract

Cystic lesions of gall bladder are very rare. Most of the cystic cholecystic pathologies are inflammatory or perihepatic cystic lesions. Only few primary cystic lesions are known and being rare pose a diagnostic and therapeutic challenge. Out of these mucinous cystadenoma(MCN) is the rarest condition and we report one such case and discuss its differential diagnosis.

### 2. Introduction

Mucinous cystadenoma of the gall bladder(MCN) is a very rare neoplasm of the gall bladder. Less than 20 patients have been described so far. AS per WHO classification it is a benign neoplasm of the gall bladder and can be unilocular or multilocular [1]. The purpose of this case report is describe the findings of MCN on imaging and discuss the differential diagnosis.

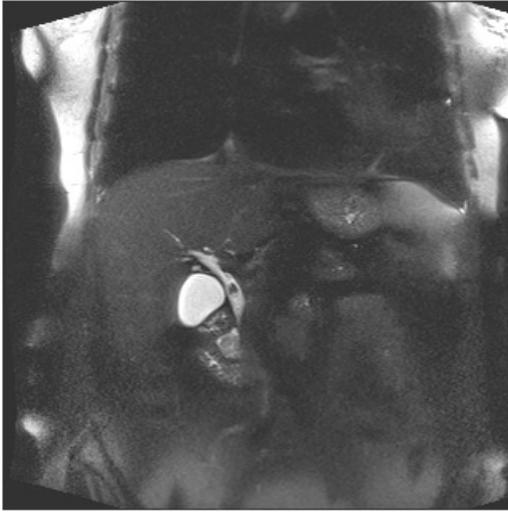
### 3. Case Report

A 72-year-old female presented with pain right hypochondrium

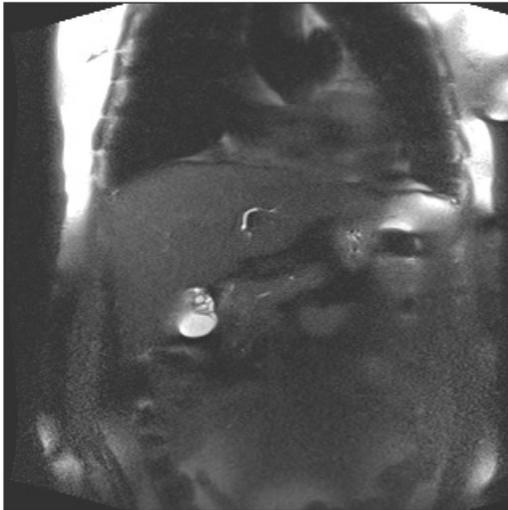
with loss of appetite and yellowish discoloration of the eyes since past two weeks. Her liver function tests were normal with normal serum bilirubin levels. Contrast enhanced computed tomography and magnetic resonance scan with cholangiopancreatography was done which revealed a 2.2x2.2 cm well defined rounded multilocular cystic mass lesion in the wall the gall bladder with enhancement of the septa and walls on CECT (Figure 1). MRI revealed similar findings confirming the cystic nature of lesion with diffusion images showing increased signal with restricted ADC with a filling defect in the common bile duct- calculus (Figure 2a-2c). A biliary stent was inserted endoscopically in the common bile duct followed by laparoscopic cholecystectomy which revealed a nodular cystic mass lesion in the wall of gall bladder with multiple septae and mucin (Figure 3). Histological examination showed smooth epithelium with spindly cells with ovarian like underlying stroma.



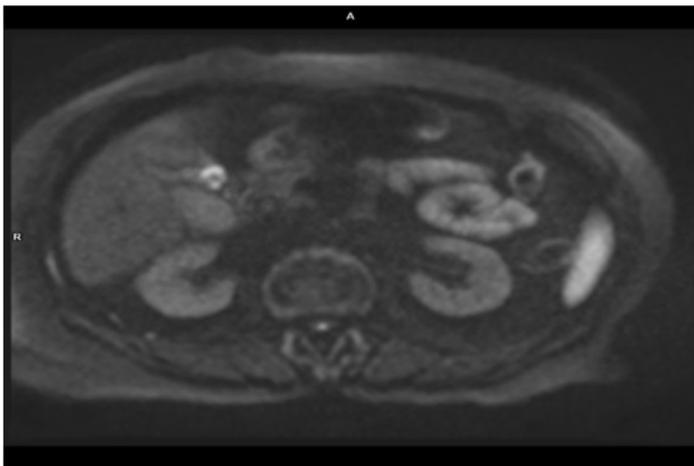
**Figure 1:** CECT axial image showing a multilocular cystic lesion in the Wall of gall bladder.



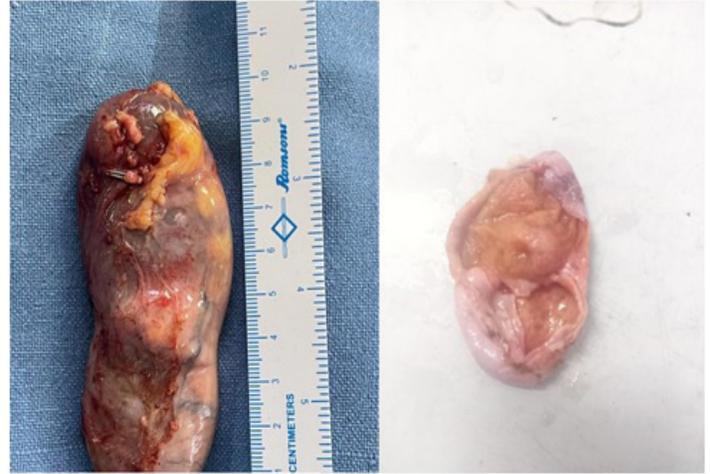
**Figure 2a:** Plain T2W coronal image showing a filling defect in the mid part of common bile duct.



**Figure 2b:** Plain T2W coronal image of gall bladder showing a multiseptated lesion in the medial wall of gall bladder.



**Figure 2c:** Axial Diffusion MR image (b=800) showing restricted diffusion with increased signal of the MCN.



**Figure 3:** Gross and cut section of the gall bladder showing nodular cystic lesion in the wall.

#### 4. Discussion

Cystic neoplasms of the gall bladder are extremely rare and if present are difficult to differentiate from other common cystic lesions like pericholecystic hepatic cysts, hydatid cysts and abscesses. There are few reported cases of primary hydatid cysts, epithelial cysts and lymphangiomas of gall bladder reported in literature which may also be difficult to differentiate from MCN which is even more rare [2-5]. Only 15 cases of MCN of gall bladder have been described in literature so far [6-7]. Adding to the diagnostic challenge is the lack of consistent evidence regarding the malignant potential of MCNs of the gallbladder which makes this entity both a therapeutic and diagnostic dilemma. Use of modern imaging techniques like contrast enhanced CT and MR can be helpful to differentiate MCN from other conditions. Use of Diffusion MR Technique shows restricted diffusion as was shown in this case which was helpful to confirm the mucinous nature of the cystic lesion and differentiated it from other types of cysts. Further presence of solid enhancing components in the cyst on imaging can also indicate its malignant nature. Even though there is lack of evidence regarding malignant potential of MCN of gall bladder [7] but there is a consistent consensus across the literature that all suspected MCNs originating in the gallbladder should be imaged and surgically removed. Histologically MCNs of gall bladder are of four types: pyloric type, intestinal, biliary and ovarian like stroma with the latter being most commonly found in adult females as seen in this case [8]. Routine ultrasound imaging is the primary modality to diagnose cystic lesions in hepatic and pericholecystic locations however it is not usually accurate in diagnosis the exact origin and type of cystic pathology. CECT accurately detects the lesion and categorizes the morphology however characterization is most accurately done by use of MRI. Advanced MRI techniques with use of contrast agents, diffusion MRI better differentiate between Simple cysts, serous cystadenomas, MCN and also are able to show any malignant transformation. To conclude MCN of

gall bladder is a rare entity and poses a diagnostic challenge. Use of modern imaging tools especially diffusion MRI technique can differentiate it from other mimicking conditions and help to plan surgical resection of the tumor.

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