

Intrahepatic Pancreatic Pseudocyst Complicating Chronic Calcific Pancreatitis - a rare cause for a cystic liver lesion

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Citation

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Abstract

Intrahepatic pancreatic pseudocyst is a very rare differential for a hepatic space occupying cystic lesion. Though pseudocysts complicating chronic calcific pancreatitis are well described, an isolated intrahepatic location is extremely rare. Moreover, intrahepatic pancreatic pseudocysts are usually described following acute pancreatitis. In this case report we describe the case of a 60 year old male presenting with epigastric pain and abdominal distension, in whom computed tomography showed features of an intrahepatic pancreatic pseudocyst complicating chronic calcific pancreatitis, which was subsequently confirmed on surgery. The etiopathogenesis and the types of intrahepatic pancreatic pseudocysts are discussed in addition to describing the imaging differentials.

INTRODUCTION

The imaging differential for cystic liver lesions are diverse and include a wide variety of causes ranging from developmental, inflammatory, neoplastic and other causes¹. An extrapancreatic pseudocyst presenting as a cystic liver lesion is considered extremely rare^{1,2} and is usually seen following acute pancreatitis. We describe the case of a 60 year old male who presented to us initially for an ultrasound scan (USG) of the abdomen with complaints of pain and distension of the abdomen. He had a previous computed tomography (CT) scan of the abdomen done one year back from elsewhere which was reported as a pancreatic head malignancy. Ultrasound showed a large cystic lesion with fine internal echoes within the left lobe of the liver. Multidetector Computed Tomography was subsequently performed which showed features of an Intrahepatic pancreatitis pseudocyst complicating chronic calcific pancreatitis. This was later confirmed on surgery. We describe in brief the etiopathogenesis and the types of intrahepatic pancreatic pseudocysts with a brief mention of the imaging differentials.

CASE REPORT

An elderly 60 year old male patient with complaints of recent worsening of a long standing epigastric pain and abdominal distension was referred to the Department of Radiodiagnosis and Imaging for an abdominal ultrasound. There was no history of fever. He had a previous computed

tomography (CT) scan of the abdomen done one year back from elsewhere which showed a calcific "mass" in the pancreatic head with pancreatic ductal dilatation reported as suspicious for malignancy. However there was no histopathological confirmation of the same. The present ultrasound scan, in addition to the calcification in the pancreatic head and the pancreatic ductal dilatation, revealed a huge cystic mass in the epigastric region, probably hepatic in origin, which was not evident in the previous CT examination. The possibility of an intrahepatic pancreatic Pseudocyst was suggested. A large liver abscess, cystic metastasis or a large intrahepatic hydatid cyst were also thought of but considered less likely.

A Contrast enhanced CT scan of the abdomen was subsequently performed for better characterization using a 16 slice Multidetector CT (GE Bright speed), which revealed dense calcification of the pancreatic head (Figure 1) with dilated pancreatic duct (Figure 2) suggestive of chronic calcific pancreatitis with no obvious features to suggest malignancy.

{image:1}

{image:2}

Peripancreatic fluid can be seen, tracking along the hepatoduodenal ligament (Short white arrow). The white arrowhead depicts the normally distended stomach.

In addition to these findings there was free fluid in the peripancreatic region which was seen tracking along the fissure for the ligamentous teres into the left lobe of the liver forming a huge intrahepatic cyst measuring about 10 x 8 cms in size, compressing and indenting the lesser curvature of the stomach (Figure 3)

Figure 3. Contrast enhanced axial CT section of the abdomen revealing a large intrahepatic pseudocyst (large white arrow). The pancreatic fluid can be seen tracking along the fissure for the teres ligament into the left lobe (long white arrow). The large intrahepatic cyst in the left lobe is compressing and indenting the lesser curvature of the stomach (white arrowhead). Incidental pneumobilia is noted (small white arrow).

With these findings the possibility of an intrahepatic pseudocyst was suggested. The other differentials such as cystic metastasis, liver abscess or an intrahepatic hydatid cyst seemed less likely in view of these findings.

The patient underwent surgery and the findings of an intrahepatic pancreatic pseudocyst was confirmed subsequently.

DISCUSSION

The differentials for a cystic liver lesion are diverse and can be classified as developmental, neoplastic, inflammatory, traumatic and various other miscellaneous causes. Though the list is long and includes lesions such as the simple (bile duct) cyst, cystic subtypes of primary liver neoplasms, embryonal sarcoma, biliary cystadenoma or cystadenocarcinoma, cystic metastases, abscesses which again maybe pyogenic or amebic, intrahepatic hydatid cyst, extrapancreatic pseudocyst, and intrahepatic hematoma and biloma, characteristic imaging findings supported by the clinical details, helps to differentiate one entity from the other in most of the cases.¹

In the present case, the previous CT did not show any focal lesion, which excluded developmental lesions such as the simple (bile duct) cyst. The age of the patient excluded Undifferentiated embryonal sarcoma. Though large hemangiomas and primary hepatocellular carcinomas can undergo cystic degeneration, the absence any enhancing areas made these differentials unlikely. Though biliary cystadenomas can occasionally be large, they are usually seen in middle aged women and may show, mural nodules and septations or even calcification¹, none of these features

were present in our case.

Cystic metastasis are usually multiple and show peripheral enhancement¹.

Though abscesses can appear as a solitary and large hypoattenuation cystic lesion, they usually have a thick wall which may show rim enhancement¹. The absence of fever and these characteristic imaging findings made the diagnosis less likely.

Intrahepatic hydatid cysts usually have a discernible wall. Moreover calcification and daughter cysts are usually seen in the majority of the cases¹. None of these features were noted in our case.

Though chronic hematomas may appear "cystic", these are usually complex with internal debris¹. The absence of any history of trauma excluded the diagnosis of hematoma.

Bilomas which may occasionally be spontaneous or more commonly seen following trauma or interventional procedure. They may have no discernible wall, calcification or septa¹. Though biloma was not initially considered as a differential in our case, at this juncture, it must be said that differentiating it from a pancreatic intrahepatic pseudocyst may not be easy.

Though pseudocysts complicating acute and chronic pancreatitis are common, an intrahepatic location is extremely rare^{1,2}. Depending on the mechanism by which the pancreatic fluid spreads, the cysts may be subcapsular or purely intraparenchymal^{3,4}.

Tracking of the pancreatic juice along the hepatoduodenal ligament from the head of the pancreas to the porta hepatis results in the formation of intraparenchymal collections³.

In our case, MDCT clearly showed the tracking of the pancreatic fluid along the porta hepatis and fissure for the ligamentous teres into the left lobe (Figure 3) which is the lobe involved in most of the cases¹.

The appearance of the Pseudocyst depends upon the stage. In the acute stage, the cyst may appear hyperattenuating with debris making it less distinct, compared to the mature stage when the cyst appears as a subcapsular, homogeneously hypoattenuating mass with a well defined capsule⁵.

In our case the cyst was rather subcapsular than purely intraparenchymal. Though the diagnosis of intrahepatic

pancreatic pseudocyst is considered difficult, especially after an episode of acute pancreatitis, when the pancreas may appear normal on imaging, in our case features of chronic calcific pancreatitis and the tracking of the pancreatic fluid into the left lobe of the liver, helped to clinch the diagnosis.

To conclude the list of differentials for a hepatic cystic lesion is vast, but with characteristic imaging findings supported with the clinical data an accurate diagnosis is possible. The presence of a purely intraparenchymal or a subcapsular cystic lesion involving the left lobe of the liver with fluid tracking along the hepatogastric ligament should arouse the possibility of an intrahepatic pancreatic pseudocyst.

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