

Intrahepatic pseudocyst complicating acute pancreatitis: A rare case report

Monaliza Lyngdoh^{*1}, Prasanta Kumar Bhattacharya², Pranjal Phukan², Kalyan Sarma², Chandralekha Baruah², Preeti Jane Picardo² and Akash Roy¹

¹Department of General Medicine, North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, India

²Department of Radiology, North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, India

*Correspondence Info:

Dr. Monaliza Lyngdoh

Assistant Professor

Department of General Medicine,

North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, India

E-mail: monalizalyngdoh@yahoo.com

Abstract

Intrahepatic pseudocysts are an extremely rare complication following acute pancreatitis with only a few cases previously described in literature. The paucity of experience and relevant literature on this condition leads to significant challenges in the differential diagnosis and management. We report herein a case of acute pancreatitis with development of left lobe intrahepatic pseudocysts with a dramatic progression prompting management by prompt drainage. The presence of liver lesions in patients with acute pancreatitis should raise the consideration of hepatic pseudocysts in the differential diagnosis, which can lead to a more prompt and appropriate management.

Keywords: pancreatitis, intrahepatic, pseudocysts

1. Introduction

Pancreatic pseudocysts are a well documented complication of acute pancreatitis, defined as a collection of pancreatic juice enclosed by a wall of non-epithelialized granulation tissue or fibrotic capsule. [1] Majority of the pseudocysts are located in the vicinity of the pancreas, but they have also been reported at distant locations in the mediastinum as well as the scrotum which occurs as the fluid dissects through tissue planes [2, 3]. However, but an intrahepatic location of a pancreatic pseudocyst is a very rare event with only a few cases reported in literature. We report a case of subcapsular intrahepatic pseudocyst in a patient suffering from acute pancreatitis.

2. Case Report

A 33-year-old male with a history of chronic alcohol intake presented with abdominal pain and nausea for a duration of 1 month. Physical examination revealed upper abdominal tenderness with a lump in the epigastric region. Laboratory parameters showed a total leucocyte count of $16200/\text{mm}^3$ with a neutrophilic predominance, anaemia with a haemoglobin of 5.3 g% mildly elevated liver transaminases (AST 56 U/L, ALT 58 U/L) and total bilirubin of 1.2 mg/dl. Coagulation parameters showed a Prothrombin Time of 11 seconds, Activated Partial Thromboplastin Time of 39.8

seconds and International Normalized Ratio of 1.72. The serum amylase and lipase levels were elevated at 359 IU/L and 269 IU/L respectively.

An abdominal ultrasonography was ordered which showed a subcapsular hepatic and perisplenic collection with a heteroechoic pancreas with inflammatory signs and prominent main pancreatic duct and a left sided effusion. There was mild coarsening of liver echotexture and the rest of the biliary system was normal. The patient's clinical condition had a downhill course with increase in size of the epigastric lump. A contrast enhanced computed tomography (CT) of abdomen and thorax revealed a heterodense pancreas showing heterogenous enhancement near its body and tail and an ill-defined hypodense lesion (7.07cm x 8.33 cm x 7.07 cm) with wall thickness of 5-6mm located in the left hepatic lobe with scalloping (Figure 1). Another subcapsular collection was noted in the superior aspect of spleen with non-visualised splenic vein along with pleural effusion. The patient underwent pleural fluid drainage with intercostals tube and the plural fluid analysis showed concomitant increased levels of amylase and lipase suggesting pleural effusion secondary to pancreatitis. With gradual worsening of the clinical condition and increasing size of epigastric collection the patient was subjected to percutaneous drainage of the subcapsular hepatic pseudocyst with malecott catheter with

aspiration of a litre of brownish coloured fluid the biochemical analysis of which showed a high amylase and lipase levels suggesting it to be pseudocyst secondary to pancreatitis. There was subsequent clinical improvement of the patient and continues to do well.



Figure 1: Contrast CT abdomen showing intrahepatic cysts in acute pancreatitis

3. Discussion

Pancreatic pseudocysts can be present in almost any organ depending on the site and path of release of pancreatic enzymes. But intra-hepatic location of pseudocyst subsequent to an attack of acute pancreatitis is extremely rare. [4, 5] Certain mechanisms have been proposed for the possible pathophysiology in the formation of hepatic pseudocysts secondary to pancreatitis. One school of thought suggests a release of pancreatic fluid that tracks through the lesser sac towards left lobe of liver along lesser omentum or gastrohepatic ligament, with consequent dissection of the liver capsule due to proteolysis and development of subcapsular collections. [6, 7] An alternate theory suggests the propagation of pancreatic juice from head of pancreas to porta-hepatis along the hepatoduodenal ligament with ultimate formation of an intraparenchymal pseudocyst.[4-7].

In the presence of signs of acute pancreatitis, the diagnosis of hepatic pseudocyst is ensured by appropriate imaging. [8] High amylase and lipase levels obtained by the aspiration of the fluid are the cornerstones for the diagnosis of the pancreatic origin.[8] In our case, the increased levels of amylase and lipase in the aspirated fluid clinched the confirmation of a pancreatic origin.

An important event in our case was the the unusual temporal evolution of liver pseudocysts. The ultrasonography performed upon admission showed subcapsular small hepatic and perisplenic collection with heteroechoic body and tail of pancreas, but the tomographic scan performed within a time lapse of 48 hours identified a defined cystic mass. In the usual temporal evolution a pancreatic pseudocyst requires a minimum of time, between 4 and 6 wk, to form the well-defined wall, a main characteristic of it.[9] However, the time span in our case extremely short. A possible explanation for this can be hat the patient may have suffered from a previous

episode of pancreatitis and that the present episode might in fact be a relapsing pancreatitis. Unfortunately, this cannot be clarified from the scarce literature on liver pseudocysts.

4. Conclusion

Intrahepatic pseudocyst should be borne in mind as a differential when an intrahepatic collection is found in patients with features of chronic or recent episode of acute pancreatitis. Tomographic scannings and high level of amylase in the collection plays an important role for diagnosing this complication. From a management perspective percutaneous drainage of intrahepatic pseudocysts can be resorted to in the face of rapidly growing collections.

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