

## Case Report

# A rare case of pancreatic pseudocyst involving liver and spleen

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## ABSTRACT

A pancreatic pseudocyst is a common complication of acute and chronic pancreatitis. We present the case of a 27-year-old man with pancreatic pseudocyst involving liver and spleen. Most of the pseudocysts are located within the head and the body of the pancreas but 20% are extrapancreatic. Several locations of the pancreatic pseudocyst such as pleura, mediastinum, and the pelvis, have been described. We present a rare case of pancreatic pseudocyst involving left lobe of liver and upper pole of the spleen.

**Keywords:** Liver, pancreatic pseudocyst, spleen

## INTRODUCTION

The pancreatic pseudocyst is a common complication of acute and chronic pancreatitis. The pancreatic pseudocyst is a collection of pancreatic juice located in and around the pancreas. The pancreatic pseudocyst is incased by a nonepithelial lining of fibrous necrotic and granulation tissue secondary to pancreatic injury. It takes at least 4 weeks to develop a pseudocyst after an episode of acute pancreatitis. The pancreatic pseudocyst can be a complication of acute as well as chronic pancreatitis. Most of the pseudocysts are located within the head and the body of the pancreas but 20% are extrapancreatic.<sup>1</sup> Several locations of a pancreatic pseudocyst such as pleura, mediastinum, and the pelvis, have been described. We present a rare case of pancreatic pseudocyst involving left lobe of liver and upper pole of the spleen.

## CASE REPORT

A 27-year-old male chronic alcoholic since 10 years came to the hospital for consultation. He was having recurrent abdominal pain with radiation to back since 2 years. He was frequently admitted in the hospital for similar episodes. High amylase level confirmed the case as acute on chronic pancreatitis. The patient was admitted with acute pain in abdomen since 15 days and upper abdominal fullness. He

had low grade fever with no vomiting. The patient also had loss of appetite, and he reported around 8-10 kg of weight loss since the first episode.

The general parameters of the patient were within normal range. On abdominal examination, a vague globular tender lump was palpable in the epigastrium. Biochemical parameters were in the normal range except for the raised total leukocyte count of 15000/dl.

Upper gastrointestinal endoscopy showed extrinsic compression of the stomach. Abdominal contrast enhanced computed tomography scan showed features of acute on chronic pancreatitis with pseudocyst within tail of pancreas (Figure 1) and subcapsular pseudocyst in the left lobe of liver and in the superior pole of spleen (Figures 2 and 3). The patient was taken for surgery and excision of the liver cyst with drainage of the splenic cyst was done as the cyst was not matured for cystojejunostomy. The cyst fluid showed high amylase level of 4320 IU/dl confirming the diagnosis of the pseudocyst. Postoperatively the patient recovered well and discharged (Figure 4).

## DISCUSSION

The pancreatic pseudocyst located in the liver is an uncommon condition. In the literature, 34 cases have been described.<sup>1</sup> As in the present case, the majority of

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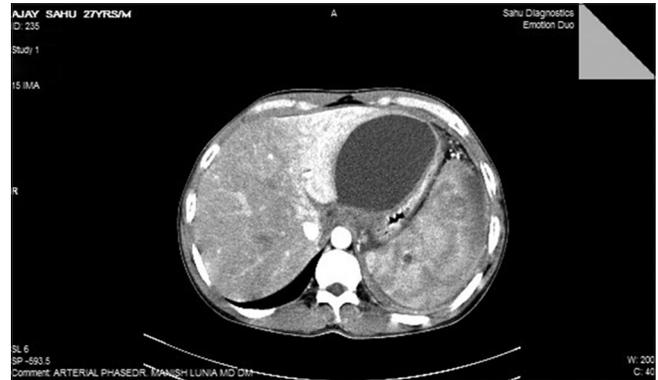
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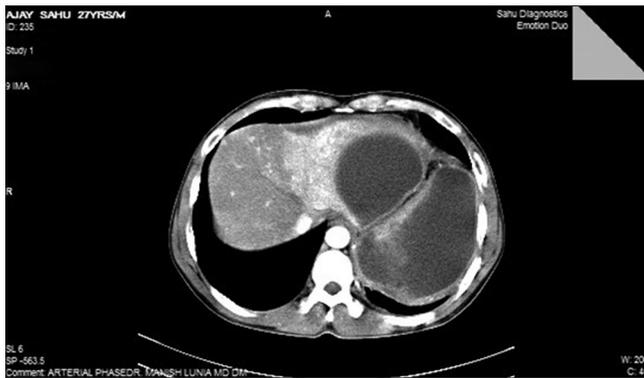
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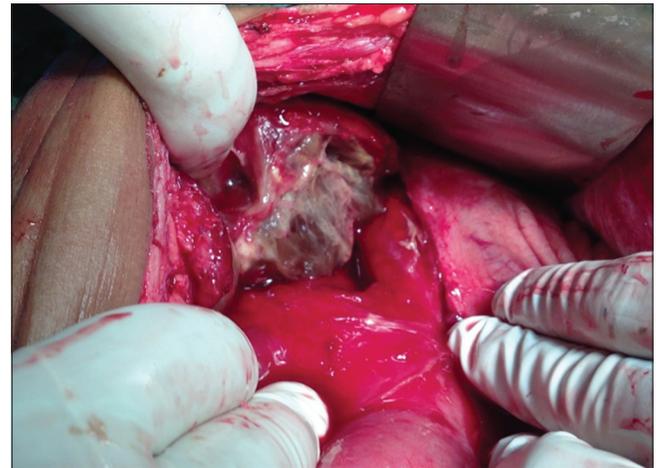
**Figure 1:** Contrast enhanced computed tomography abdomen showing pseudocyst of the tail of pancreas



**Figure 3:** Contrast enhanced computed tomography abdomen showing pseudocyst in the left lobe of liver



**Figure 2:** Contrast enhanced computed tomography abdomen showing pseudocyst in the left lobe of liver and spleen



**Figure 4:** Intraoperative picture of pseudocyst of liver

liver pancreatic pseudocysts are located in the left hepatic lobe.<sup>2</sup> The proteolytic effect of pancreatic enzymes has been proposed as a pathogenic mechanism. These enzymes promote the formation of pseudocysts in multiple locations, including the liver, pleura, mediastinum, and retroperitoneum.<sup>3</sup> The hepatoduodenal ligament has been proposed as a way for spreading between the pancreas and the liver.<sup>4</sup> A puncture through the liver may open a tract between these two organs. The pancreatic pseudocyst located in the liver must be included in the differential diagnosis of liver cystic lesions<sup>5,6</sup> like neoplasms. The pancreatic pseudocyst located in the liver cause no specific symptoms and is incidentally diagnosed by the identification of a liver cystic lesion during acute pancreatitis. Liver studies are usually normal, with no transaminase increase. Exceptionally, the pancreatic pseudocyst located in the liver can produce hepatomegaly, jaundice, or an abdominal palpable mass.<sup>7</sup> An easy confirmation may be obtained by amylase levels in the contents of the pseudocyst.<sup>8</sup> Almost every pancreatic pseudocyst improves spontaneously and needs no specific treatment.<sup>9</sup> Draining is mandatory when symptoms secondary to compression of adjacent organs are found. It is also necessary to act when the following complications develop: Rupture, infection, or bleeding. Depending on the complexity of the pseudocyst, its communication with Wirsung's duct, and the existence of ductal injury, we may perform a percutaneous, endoscopic, or surgical drainage. The majority of published

pancreatic pseudocysts located in the liver were treated with percutaneous or surgical drainage. Criteria to drain a pancreatic pseudocyst located in the liver have not been established. Almost all patients were treated surgically in times when radiology had a lower accuracy, and when percutaneous drainages were not available. Percutaneous drainage was promoted because it allows diagnosis confirmation and treatment.<sup>8</sup> Nevertheless, in agreement with the new trends; we propose an initial expectant attitude if the diagnosis is clear, thus restricting percutaneous drainage for symptomatic and complicated cases. Involvement of spleen is rather unusual and sometimes can result in tragic consequences. Low frequency and little experience do not allow definitive conclusions but it believed that the involvement of the spleen can take place by the action of pancreatic enzymes on splenic parenchyma or by invasion of spleen through hilum along the blood vessels.

## CONCLUSION

We present the rare case of a patient with reactivated chronic alcoholic pancreatitis complicated with the development of pseudocyst in liver and spleen. Differential diagnosis to pancreatic pseudocyst should be kept in mind while dealing with cystic lesions of liver and spleen. Different methods of

managements are available. This patient was managed surgically with a positive outcome. Finding of the present study will be useful for surgeons to choose appropriate modalities of management in these types of cases.

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## PEER REVIEW

Double blinded externally peer reviewed.

## CONFLICTS OF INTEREST

Nil

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## REFERENCES

1. Guesmi F, Zoghalmi A, Saidi Y, Najeh N, Dziri C. Pancreatic pseudocysts located in the liver: A systematic review of the literature. *Tunis Med* 2009;87:801-4.
2. Bhasin DK, Rana SS, Chandail VS, Nanda M, Nadkarni N, Sinha SK, *et al.* An intra-hepatic pancreatic pseudocyst successfully treated endoscopic transpapillary drainage alone. *JOP* 2005;6:593-7.
3. Baranyai Z, Jakab F. Pancreatic pseudocyst propagating into retroperitoneum and mediastinum. *Acta Chir Hung* 1997;36:16-7.
4. Shibasaki M, Bandai Y, Ukai T. Pancreatic pseudocyst extending into the liver via the hepatoduodenal ligament: A case report. *Hepatogastroenterology* 2002;49:1719-21.
5. Pelletier G. Diagnosis of cystic lesions of the liver. *Ann Chir* 1997;51:267-71.
6. Mortelé KJ, Ros PR. Cystic focal liver lesions in the adult: Differential CT and MR imaging features. *Radiographics* 2001;21:895-910.
7. Aguilera V, Mora J, Sala T, Martínez F, Palau A, Bastida G, *et al.* Endoscopic treatment of pancreatitis and its complications. *Gastroenterol Hepatol* 2003;26:13-8.
8. Polaków J, Serwatka W, Dobrzycki S, LAdny JR, Janica J, Puchalski Z. A new diagnostic approach to pancreatic pseudocyst fine-needle puncture: Three-dimensional sonography. *J Hepatobiliary Pancreat Surg* 2004;11:159-63.
9. Cheruvu CV, Clarke MG, Prentice M, Eyre-Brook IA. Conservative treatment as an option in the management of pancreatic pseudocyst. *Ann R Coll Surg Engl* 2003;85:313-6.

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