

SUBCAPSULAR HAEMATOMA OF THE SPLEEN - A COMPLICATION OF ACUTE PANCREATITIS

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CASE REPORT

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Abstract

The intimate relationship of the tail of the pancreas and the splenic hilum makes the spleen vulnerable to the inflammation of the body and the tail of the pancreas. The involvement of the spleen in pancreatitis is increasing and it includes lesions like perisplenic or intrasplenic pseudocysts, subcapsular hematomas, intrasplenic haemorrhage, splenic infarction and splenic rupture. We present the case of a nontraumatic subcapsular haematoma of the spleen in a patient with alcohol related pancreatitis.

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Introduction

The most common complications of acute pancreatitis are pseudocyst of the pancreas, abscess, necrosis and extension into adjacent organs and the treatment for all these lesions is well established [1,2].

The intimate relationship of the tail of the pancreas and the splenic hilum makes the spleen vulnerable to the inflammation of the body and the tail of the pancreas. The involvement of the spleen in pancreatitis is increasing and it includes lesions like perisplenic or intrasplenic pseudocysts, subcapsular hematomas, intrasplenic haemorrhage, splenic infarction and splenic rupture [3,4].

Differential diagnosis can be made even with ruptured splenic hydatid cyst [5].

We present the case of a nontraumatic subcapsular haematoma of the spleen in a patient with alcohol related pancreatitis.

Case report

A 44 year old woman known with episodes of acute pancreatitis and alcohol abuse presented to the emergency room with pain in the upper abdomen, especially in the left upper quadrant, nausea, vomiting and loss of appetite. Clinically she had pale skin and mucosa and plethoric facies, pain in the left upper quadrant and meteorised abdomen.

She was haemodynamically stable and laboratory investigations revealed moderated anemia (8.7mg/dl), trombocytosis (765.000/uL), leucocytosis (13.860/uL) and a serum amylase of 169 UI/L.

A simple abdominal radiography showed that the left diaphragm ascended and a macronodular mass in the right adrenal gland.

Abdominal ultrasound revealed a spleen of 116mm, inhomogeneous ecostructure, irregular outline of the spleen and a liquid

perisplenic collection suggestive for a subcapsular haematoma. It also showed a mass in the right adrenal gland of 46/42 mm.

A CT scan of the abdomen and pelvis was performed and it revealed a lesion of the spleen with subcapsular hematic accumulation, free fluid in the peritoneal cavity, chronic pancreatitis with dilated Wirsung duct and an encapsulated mass in the right adrenal gland (Figure 1).

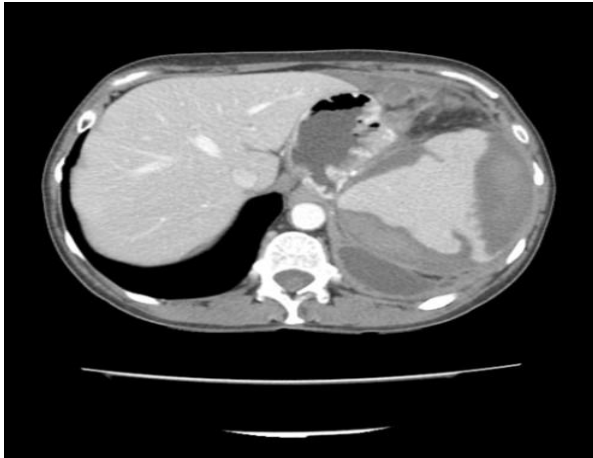


Figure 1 - CT scan of the abdomen

An exploratory laparoscopy was performed and it revealed free hematic fluid and hematomas in the peritoneal cavity, large tumoral mass of mixed consistency around the spleen. This mass was punctured and blood was aspirated. The surgeon decided to convert to open laparotomy and it revealed a grade V rupture of the spleen and splenectomy was performed.

The patient was discharged on the eighth postoperative day and continued at home the treatment with Rivaroxaban 10mg per day for 30 days and the triple vaccination was done (anti-pneumococcal, anti-meningococcal, anti-Haemophilus influenzae).

The histopathological examination showed hemorrhagic fragments of the spleen and a fragment of 2.5/1.5/1mm indicating a fibrous delimitation of a citosteatonecrosis zone.

Discussion

One of the least common complications of pancreatitis are the hemorrhagic complications of the spleen [6,7].

It is believed that the direct contiguity of the pancreatic tail and the hilum of spleen, in the absence of peritoneal division, provides a portal for inflammatory extension [8,9].

The involvement of the spleen in pancreatitis is not common but it may occur by one of the following three mechanisms: 1. Splenic vessel complications (thrombosis or pseudoaneurysm formation); 2. Dissection of a pancreatic pseudocyst into the hilum of the spleen that could cause splenic rupture, splenic infarction, arterial hemorrhage or venous thrombosis by erosion; 3. Extension of the inflammatory process from the pancreatic tail into the splenic hilum which may lead to splenic hematoma [1,2,10].

The incidence of pseudocyst extension into the spleen has been estimated to be around 1% and the non-cystic pancreatic inflammation is less common [8,11].

The diagnosis of a subcapsular hematoma of the spleen should be taken in consideration in any patient with pancreatitis who also has a mass in the left upper quadrant, pain going to the left shoulder or rib cage, moderate fall in hematocrit or evidence of diaphragmatic irritation such as splinting [2,11,12].

The lack of specific symptomatology related to splenic complications underlines the importance of CT for diagnosis. Contrast enhanced helical CT scans is the most commonly used modality for diagnosis and follow-up of patients with pancreatitis and its attendant complications [13].

The treatment of subcapsular splenic hematomas depends on the patient status; if the patient is haemodynamically unstable he requires emergency laparotomy with splenectomy or distal pancreatectomy. In case of haemodynamically stable patients the treatment should be elected after

examining the CT: you should choose between observation, percutaneous drainage or surgery [14].

Conclusions

The lesions of the spleen in pancreatitis are increasing in the last decades. The most likely symptoms with which patients present include left upper quadrant pain and the severe cases present haemodynamically unstable patients. Early diagnosis include monitoring the patient and CT of the abdomen showing pancreatic and splenic damages. The treatment can be conservative in cases with small haematomas and stable patients, but in what concerns the unstable patients they usually need surgery for splenectomy.

References

[1]Thompson JE Jr, Ashley SW. Subcapsular hematoma of the spleen associated with acute pancreatitis. *Surgery* 1997; 121:231-3.
[2]Lankisch PG. The spleen in inflammatory pancreatic disease. *Gastroenterology*, 1990; 98: 509-16.
[3]Patil, Pradeep V, Khalil, Ahmed and Thaha, Mohamed A. Splenic Parenchymal Complications in Pancreatitis. *JOP. Journal of the Pancreas*. 2011; 12(3):287-291.
[4]Toussi HR, Cross KS, Sheehan SJ, Bouchier-Hayes D, Leahy AL. Spontaneous splenic rupture: a rare complication of acute pancreatitis. *Br J Surg* 1996; 83:632.
[5]Constantin VD, Popa F, Socea B, Carâp AC, Bălălău C, Motofei I, Banu P, Costea DI. Spontaneous rupture of a splenic hydatid cyst with anaphylaxis in a patient with multi-organ

hydatid disease. *Chirurgia*, 2014; 109(3): 393-5.

[6]Siu TL. Percutaneous drainage of spontaneous subcapsular haematoma of the spleen complicating chronic pancreatitis. *Surgeon* 2004; 2:52-5.

[7]Kurarnitsu T, Kormatsu M, Ono T. et al. Ruptured subcapsular giant hematoma of the spleen as a complication of chronic pancreatitis. *Intern med* 1995; 34(6):564-8.

[8]Warshaw AL, Chesney TM, Evans GW, McCarthy HF. Intrasplenic dissection by pancreatic pseudocysts. *N Engl J Med* 1972; 287:72-5.

[9]Sitzmann JV, Imbembo AL. Splenic complications of a pancreatic pseudocyst. *Am J Surg* 1984; 147:191-6.

[10]Mauro MA, Schiebler ML, Parker LA, Jaques PE. The spleen and its vasculature in pancreatitis: CT findings. *Am Surg* 1993; 59:155-9.

[11]Vybomy CJ, Merrill TN, Reda J, Geurkink RE, Smith SJ. Subacute subcapsular hematoma of the spleen complicating pancreatitis: successful percutaneous drainage. *Radiology* 1988; 169:161-2

[12]Donckier V, Rypens F, Vandestadt J. Unusual splenic complication of acute pancreatitis. *J Clin Gastroenterol* 1992; 15:245-7.

[13]Rypens F, Deviere J, Zalzman M, Braude P, Van de Stadt J, Struyven J, et al. Splenic parenchymal complications of pancreatitis: CT findings and natural history. *J Comput Assist Tomogr* 1997; 21:89-93.

[14]Heider R, Behrns KE. Pancreatic pseudocysts complicated by splenic parenchymal involvement: results of operative and percutaneous management. *Pancreas* 2001; 23:20-5.