

# Ruptured Retroperitoneal Splenic Artery Pseudoaneurysm – A Case Report.

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## Abstract

A 38-year-old lady, known alcoholic and hypertensive, presented to the Emergency Room with epigastric pain radiating to the back for 5 days and aggravated pain with fever and vomiting for 2 days. There was no history of trauma. Her blood pressure was 240/140mmHg initially and dropped to 110/60; the pulse rate varied from 130 to 160/min., regular. The patient had guarding and tenderness in the left hypochondrium, but no abdominal distention/palpable mass/free fluid. Focused Assessment with Sonography for Trauma (FAST) showed a spleen of 9.8cm with multiple ill-defined hypoechoic areas (suggestive of contusion). A hematoma measuring 9.8x7.1cm was seen in the infraplenic region and anterior to the left kidney. The splenic pedicle showed doubtful vascularity. The left kidney appeared normal. Hemoglobin dropped to 7g%. In view of the rapidly deteriorating hemodynamic status, an emergency exploratory laparotomy was done.

Intraoperative findings: about 10x10x5cm ruptured fibrous cystic lesion postero-superior to the region of the body of the pancreas with eroded splenic artery and its protruding ends in the wall of the cyst; clot in the distal segment; hematoma and serosanguinous contents over splenic bed and left kidney suctioned; active bleeding from the distal segment, when clot got dislodged; thickened vessel wall; splenic artery ligation done at both ends; spleen, kidney and pancreas: normal; intracystic drain placed; part of sac excised and sent for histopathological examination, which was consistent with a pseudocyst of the pancreas.

Pseudoaneurysm of the splenic artery is a known vascular complication of pancreatitis. The lesion can be outside or inside a pancreatic pseudocyst which, in our case, was retroperitoneal. All splenic artery pseudoaneurysms, symptomatic or asymptomatic, irrespective of size/cause, need intervention. Depending on risk-benefit ratio, expertise, hemodynamic stability and golden hour, treatment can be angioembolisation or surgical intervention.

## BACKGROUND

Pseudoaneurysm means

## PRESENTATION

A 38-year-old lady presented to the Emergency Room with epigastric pain radiating to the back for 5 days, and aggravated pain, fever and vomiting for 2 days. There was no history of jaundice, melena, trauma or previous surgeries. She has been a known hypertensive for 2 years, consuming alcohol.

On examination: No pallor; pulse rate 130/min, regular; blood pressure 240/140 mmHg; temperature 100

## DISCUSSION

The major cause of pseudoaneurysm remains pancreatitis,

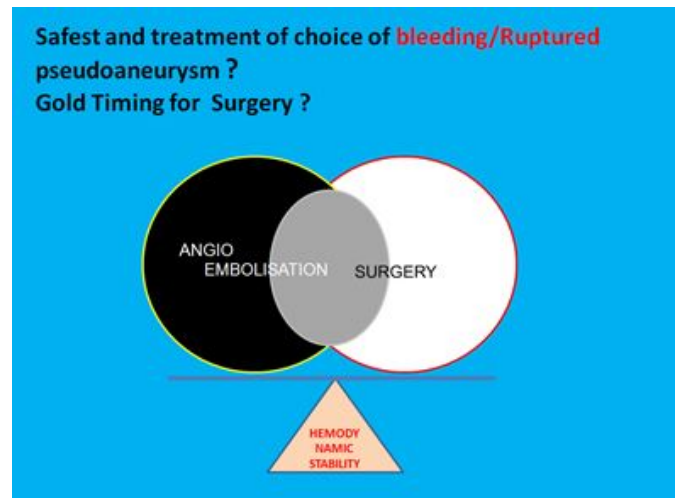
which is, in turn, commonly predisposed by ethanol. It is commonest in the splenic artery, followed by the gastroduodenal artery. We report a case of ruptured retroperitoneal pseudoaneurysm, which is very rare (12-13). So far, about 200 cases of splenic artery pseudoaneurysms have been reported, but the incidence could be much higher. The presentation-diagnosis interval usually varies between 2 hours to even 4 days, which is sometimes challenging and not straightforward, with the disease simulating an acute abdomen like pancreatitis (14). The presenting symptoms can be melena, hematochezia, hemosuccus pancreaticus, hemobilia, incidental abdominal pain or back pain. The sentinel bleedings need to be recognized. The percentage of diagnosis by immediate laparotomy or autopsy is around 6.7%. The accuracy of ultrasonography is operator-dependent. However, the swirling blow in the

pseudoaneurysm can be well appreciated with Doppler. Any hypoechoic lesion within the pseudocyst should be interrogated with color Doppler and further evaluation should be done with contrast-enhanced CT to rule out splenic artery pseudoaneurysm formation. High density in a peripancreatic fluid collection should raise a high index of suspicion. The size of the lesion does not predict complications and success of angioembolisation. Mortality is high in untreated cases (as high as 90%). The conservative management has almost no role. Catheter angiography is the gold standard for confirmation. During intervention, the superior and inferior mesenteric artery, and the celiac/splenic vessels could be catheterised. Other modalities of diagnosing include MDCT, Doppler, EUS and MRI. (6) The success rates of angioembolisation range widely from 79 to 100 %. With chronic pancreatitis in the background as the etiology, the mortality goes up to 12-33%. The rebleeding rate is 20-66% and failure rates are higher with pseudocysts. Embolisation is technically difficult for giant pseudoaneurysms (>5cm). (3,6,15).

The treatment modality and choice has to be individualised. Resectional surgeries are offered especially in the setting of chronic pancreatitis; unlike after trauma, the etiology persists and the pancreas is diseased. Options include distal pancreatectomy and pancreaticoduodenectomy, if the pancreas is involved extensively. Splenectomy with or without pancreatectomy is considered, if pseudoaneurysms are near the splenic hilum. Ligation of vessels alone can be done, like in our case. (16,17) The circulation to the pseudoaneurysm can be maintained by the splenic artery and also from the short gastric vessels and rarely from pancreatic vessels, as evident from bleeding from both the ends in the pseudocyst cavity in our case.

### Figure 5

Shows the therapeutic options on recognition of a pseudoaneurysm in the light of hemodynamic stability.



Embolisation in tackling bleeders from multiple vessels needs availability of interventional setup and also expertise to remedy within the earliest possible time. Any time there could be a failure or delay, which warrants surgical intervention. In order not to risk the life of the patient, a double setup arrangement has to be done. Embolisation can also tide over the crisis and buy time so that later definitive resectional procedures can be planned electively, when the patient is stable and completely evaluated for other causes like tumor. To decide on surgery or embolisation is a collective responsibility of the surgical as well as the interventional team.

### CONCLUSION

Pseudopancreatic aneurysms are vascular complications of pancreatitis, which warrant a high index of suspicion at clinical, radiological, endoscopic and at surgical levels. All splenic artery pseudoaneurysms, symptomatic or asymptomatic, irrespective of size or cause, need to be treated at the earliest. This particular diagnosis, a curable cause, can be devastating if missed and will eventually slip into a blunderous end.

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