

PANCREATIC PSEUDOCYST CAUSING GASTRIC OUTLET OBSTRUCTION IN A 35 YEAR OLD MALE

N. Ali, E. U. Eni

Department of Surgery, University of Maiduguri Teaching Hospital, Maiduguri.

ABSTRACT

Pancreatic pseudocyst is an uncommon clinical entity in our environment and for it to cause gastric-outlet obstruction is even a rarer even in our practice. The overall incidence is unknown but the frequency may be more than is reported. It is commonly associated with alcohol related pancreatitis, trauma or cholelithiasis. The cyst is commonly found between the stomach and the transverse colon, or between the stomach and the liver in the lesser sac, but it has the potential of extending to any other site. The clinical features are non-specific. If as in this case, the presentation is epigastric pain, persistent vomiting, severe weight loss an epigastric mass, the diagnosis may not be suspected. Abdominal ultrasonography is a useful diagnostic tool with almost equal value to a computerized tomography (CT) scan. An upper gastrointestinal series with barium contrast medium is less sensitive and of secondary importance with evolution of Ct scan. Treatment includes both operative and non-operative measures. This paper stresses the usefulness of serial ultrasound scans in following up patient who had acute pancreatitis or blunt abdominal trauma.

KEY WORDS: *Pancreatic pseudocyst, acute pancreatitis, complication.*

INTRODUCTION

A pancreatic pseudocyst is a localized collection of pancreatic juice enclosed in a wall of fibrous or granulation tissue. It is associated with gallstones, or alcohol abuse in 75% of cases¹. It may also be found in association with pancreatic cancer. The lesion is often found after an attack of acute pancreatitis in 50 to 70% of cases and following trauma in 15 to 25% of cases^{1,2,3}. The cysts lack epithelial lining, may be parenchymal or found in adjacent spaces and may be associated with duct disruption. The cyst fluid contains inflammatory cells, and bacteria and is rich in amylase. It is twice as common in males and the average age of occurrence is 45 years. The clinical features of epigastric pains and mass, nausea, vomiting and anorexia 3 or 4 weeks after an attack of pancreatitis or trauma are suspicious but not diagnostic. An abdominal ultra sound confirms the diagnosis in most cases. Computerised tomography (CT) scan has the added advantage of picking smaller cysts and is the gold standard, where available. Every patient who had suffered acute pancreatitis or a blunt abdominal trauma that did not warrant a Laparotomy should be followed up with serial abdominal ultra sound scans to detect the formation of a pseudocyst³. The choice of appropriate operative technique and its optimal timing are critical to a successful outcome. However, as a benign condition, the prognosis is very good except where it is associated with carcinoma of the pancreas.

CASE REPORT

A 35-year-old male, presented with one-week history of colicky epigastric pain, associated with bouts of bilious vomiting and fever. A diagnosis of acute peptic ulcer disease was made. He made satisfactory recovery on intravenous fluids, nasogastric suction, intravenous cimetidine, and analgesics and was discharged after 5 days.

He presented again 2 months latter with an epigastric mass that had progressively increased in size, associated with easy fullness after meals, vigorous peristaltic waves, epigastric pain and vomiting. He lost about 13 kg during the period. There was a previous history of alcohol abuse but no jaundice. He was wasted, pale and dehydrated. There was huge epigastric mass, measuring about 15 x 20 cm, that was firm to hard in consistency, fixed and tender. There was no hepatosplenomegaly or ascites.

The haematocrit was 40%, total white blood cell count (WBC) was $6.7 \times 10^9/L$ with marked neutrophilia of 80%. The liver function tests, serum proteins and urea and electrolytes were normal. The fasting blood sugar was 3.6 mmol/L. Plain abdominal and chest radiographs were normal. Abdominal ultrasound confirmed the mass to be cystic and well encapsulated. The barium meal showed an extra gastric mass lesion, displacing the stomach to the left and anteriorly, severely narrowing its lumen and widening the duodenal loop. Computed tomography scan (CT – Scan) showed the cyst to be arising from the head and body of the pancreas.

A laparotomy through an upper midline incision confirmed a huge pancreatic pseudocyst in the lesser sac, between the stomach and the liver, displacing the narrowed stomach anterolaterally and partially obstructing the duodenum. The rest

*Correspondence: Dr. A. O. Fasola

Figure 1: CT abdomen: Showing a huge cystic mass lesion with a well defined capsule anterior to the spleen and the kidney of the left side crossing the mid-line with a clear interface between it and the spleen and left kidney. The cyst arises from the head and body of the pancreas.

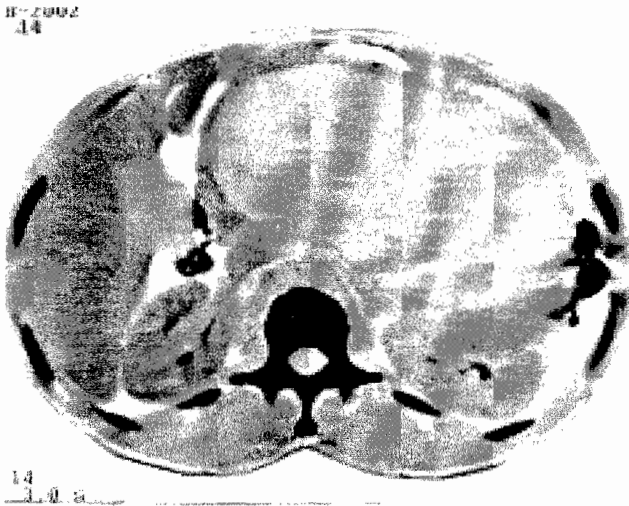


Figure 2: A Barium Meal, showing a well defined extrinsic impression on the lesser curvature of the stomach due to a soft tissue mass, displacing the stomach to the left. Abdominal ultrasound scan confirmed the mass to be the cystic and retroperitoneal

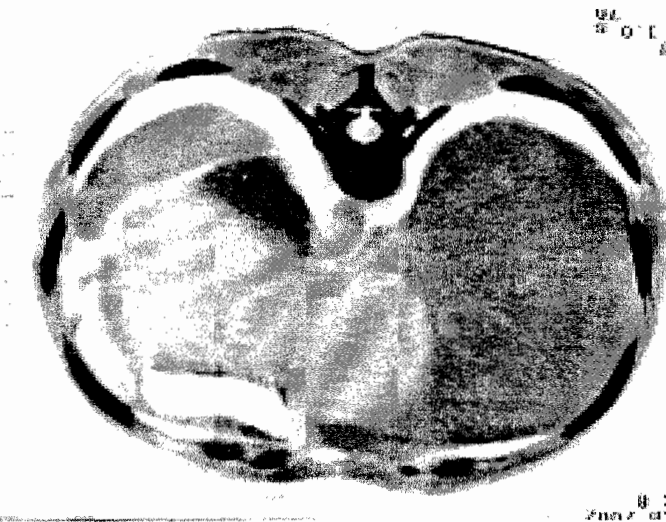


Figure 3: A Barium Meal, an upper gastrointestinal series showing a normal stomach mucosa, but the stomach is displaced anteriorly and laterally to the left with narrowing of its lumen and widening of the "C" loop of the duodenum.



DISCUSSION

The original description of pseudocyst was given by Morgagni in 1761 and the first surgery to be performed for this condition was marsupialization by Bozeman in 1882⁴. This was followed by safer and better modalities of treatment including endoscopic and radiologically guided percutaneous drainage based on a better understanding of the condition^{5,6}.

The condition described as a localized collection of pancreatic secretions may be associated with pancreatic duct disruption. It is not common in tropical Africa because acute pancreatitis and biliary tract diseases have a low incidence here^{7,8}. However, 1 – 8% of cases of pancreatitis are complicated by pseudocyst formation making it relatively rare.

This case illustrates a rather rare variant associated with an epigastric mass, features of gastric outlet obstruction and severe weight loss, which may simulate carcinoma of the stomach. The previous episode of acute abdominal pain in this patient was treated as an acute exacerbation of duodenal ulcer because of its similarity in presentation to acute pancreatitis. Gastric outlet obstruction occurs rarely in pancreatic pseudocyst as the cyst is commonly found between the stomach and the liver in the lesser sac, or between it and the transverse colon displacing the transverse colon wards. In a series of 10 papers reviewing over 596 cases, of pancreatic pseudocyst, gastric outlet obstruction was the least common presentation accounting for 2.6% of cases⁴. Epigastric pain is the commonest symptom, occurring in 98% of patients. A palpable mass in the epigastrium is found in 60% of cases. Its fixity is dependent on the amount of surrounding fibrosis. It is usually tender³. Diagnosis of pancreatic pseudocyst remains a difficult problem, because of many differential diagnoses.

of the abdominal viscera were normal. A transgastric pseudocystogastrostomy was done, through an elliptical incision of about 5cm on the posterior wall of the stomach. About 2 litres of coffee ground fluid was drained. The edges of the incision were sutured with continuous silk stitch. The patient made a satisfactory recovery and was discharged after 10 days. At 2 months follow up, he remained free of any complaints, a repeat abdominal ultrasound showed no recurrence and he is gaining weight.

There is no single laboratory test that is diagnostic. However, the serum and urinary amylase remain elevated. This has been found to be so in 52% of patients with uncomplicated chronic pseudocyst⁹. Abdominal ultrasound is a useful diagnostic tool with an accuracy of 90% as reported by Bradley and Clement. In their series, 20 of 21 patients were accurately diagnosed by ultrasound¹⁰. Computerised tomography gives a better resolution and has the ability to demonstrate smaller cysts especially those arising from the body and tail of the pancreas, which accounts for 2/3rd of all the cysts (Figs. 1 & 2). There is however, little to choose between it and ultrasonography as this test is cheaper and widely available. It is used to follow up the progress of the cyst, and to determine the thickness/maturity of its wall. An upper gastro intestinal series with barium contrast medium (Fig. 3) is less sensitive and it does not tell a cystic from a solid mass lesion nor does it pick small cysts especially in the region of the head. It shows a normal stomach mucosa, but the stomach is displaced anteriorly and laterally to the left with narrowing of its lumen and widening of the 'C' loop of the duodenum. It is therefore, of secondary importance, with the evolution of C – scan and abdominal ultrasound as gold standards.

The optimal timing for surgery is critical for the operative treatment of pancreatic pseudocyst. Boggs et al have adopted an arbitrary period of 4 to 6 weeks before internal drainage. This was based on the work of Warren who studied cyst wall maturity in animal models¹¹. If the operation is done earlier, when the cyst wall is not mature, it may not hold sutures making internal drainage unsuccessful. If it is done too late, complications may develop before drainage including infection, hemorrhage or rupture of the cyst. The choice of appropriate operative procedure depends on the experience of the surgeon, condition of the patients and the location and accessibility of the cyst. Internal drainage into a juxtaposed hollow viscus may be a pseudocystogastrostomy, pseudocystojejunostomy or pseudocystoduodenotomy depending on which, structure it is adherent to. Cystogastrostomy is associated with a recurrence rate of about 8 – 10% and post operative complication of 29%^{9,12}. It is the commonly practical procedure. External (percutaneous) drainage as practiced by Colhoun et al is indicated in those whose clinical status prohibits a more extensive intervention. It is guided by ultrasound or CT simple aspiration is attended by a recurrence rate of 70%. Insertion of a pigtail catheter afterwards ensures a 90% success¹³. Where the cyst is associated with carcinoma of the pancreas, treatment will depend on the stage of the cancer and its location. Partial or total resection of the pancreas with the cyst is the operation of choice for malignant cysts⁸. However, where a malignant cyst is unresectable, internal drainage is permissible⁸.

In conclusion, pancreatic pseudocyst is a rare condition in this environment. An antecedent history of acute pancreatitis in a patient who abuses alcohol is highly suggestive of the condition. A serial abdominal ultrasound in the follow up of such

patients ensures an early diagnosis. Quite a significant number resolve spontaneously under observation but some may progress and require treatment in form of percutaneous drainage under CT or ultrasound guidance or by an internal drainage procedure mainly via pseudocystogastrostomy.

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