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A Case Of Pancreatic Pseudocyst Following Acute Pancreatitis

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Clinical history

A 35-year-old male presented with –

- Complaints of pain abdomen, localized to the mid-upper abdomen and radiating to the back, for 2 days, aggravating on the consumption of food with no relieving factors.
- Associated with vomiting, vomitus was non-bilious, non-blood tinged, and non-projectile.
- Complains of fever, moderate grade, and continuous for 1 day.
- History of abdominal distension(+).
- History of anorexia.
- No history of loss of weight/jaundice/dyspepsia/clay-colored stools/high colored urine/bowel or bladder disturbances.

PAST HISTORY:

- History of similar complaints one month back and was diagnosed as acute pancreatitis with cholelithiasis and was managed conservatively.
- H/O chronic alcohol consumption before 13 years – (consumed whiskey 4-5 times/week)
Examination

A middle-aged male patient moderately built and nourished, well oriented to time, place, and person, alert, conscious, and cooperative.

No Pallor

No Icterus

No Cyanosis

No Clubbing

No generalized Lymphadenopathy

No Edema

Vitals:

Pulse rate: 108 bpm

BP: 130/82 mmHg

RR: 20 CPM

Temperature: febrile(100F)

Systemic Examination:

1. PER ABDOMEN EXAMINATION

INSPECTION:

A spherical mass of ~10x8cm size present in the epigastric region does not move with respiration.
The skin over the abdomen normal, with no scars or sinuses.

No visible pulsation or peristalsis, no dilated veins.

Hernial orifices are normal.

PALPATION:
No local rise in temperature,

Tenderness present in the epigastric region+

Spherical mass of 10x8cm palpate, localized in the epigastric region with well-defined margins and smooth surface tense and cystic inconsistency.

No Hepatosplenomegaly

PERCUSSION
Impaired resonance heard over the mass.

AUSCULTATION:
No bruits on auscultation.

2. Cardiovascular System: S1, S2 heard, no murmurs

3. Respiratory System: Bilateral Normal vesicular breath sounds heard, no added sounds


Investigations

Hb -14.8gm/dl

TLC-10380cells/cumm
DLC:

- Neutrophils: 86.2
- Lymphocytes: 10.4
- Eosinophils: 0.2
- Monocytes: 3.0
- Basophils: 0.2

PCV: 42.4%

- RBC count: 4.99 million/cumm
- Random blood sugar: 114 mg/dl
- Lipase: 116 U/l
- Amylase: 613 U/l
- TLC: 10380 cells/cumm
- Platelet count: 2.45 lakh/cumm
- Albumin: 3.5 g/dl
- Total proteins: 5.8 gm/dl
- A.G ratio: 1.5
- AST: 13 U/l
- Bilirubin direct: 0.19 mg/dl
- ALT: 12 U/l
- ALP: 85 U/l
- MCV: 85 fl
Mchc-34.9gm/dl

Serum Urea- 14mg/dl

Serum Creatinine—0.69mg/dl

Uric acid-3.7mg/dl

Sodium-135mEq/L

Chloride-97mEq/L

CT ABDOMEN AND PELVIS (WITH AND WITHOUT CONTRAST)

- Showed large well defined thick-walled peripherally enhancing cystic lesion measuring 10.8x13x1cm in the lesser sac - pseudocyst.
- Mild pancreatic and mesenteric fat stranding; minimal ascites - acute pancreatitis.
- Cholelithiasis with solitary distal CBD calculus.
- Mild splenomegaly.
UGI ENDOSCOPY:

Extrinsic impression over stomach (lesser curvature extending to distal body) - pseudocyst related

**Diagnosis**

Differential Diagnosis:

* Pancreatic pseudocyst.

* Gastric outlet obstruction due to peptic ulcer disease

* Hydatid cyst

* Neoplasm of the pancreas.

**Diagnosis:**
PSEUDOCYST OF PANCREAS FOLLOWING ACUTE PANCREATITIS WITH CHOLELITHIASIS

Treatment

ENDOSCOPIC CYSTOGASTROSTOMY (a minimally invasive method wherein EUS (endoscopic ultrasound) and fluoroscopy are used to identify the pseudocyst, and which helps in creating a fistula in between the cystic cavity and either the stomach/duodenum and thus helps in the drainage of the cyst.)

Discussion

Pseudocyst is a collection of amylase-rich fluid in a well-defined wall of fibrous granulation tissue, pseudocysts arise following acute pancreatitis and require about 4 weeks or more to form from the onset of acute pancreatitis (1). Pseudocyst account for 75% of all pancreatic masses. Pseudocysts are classified into three types based on the underlying etiology of pancreatitis. They define three distinct types of pseudocysts: Type I, or acute “post-necrotic” pseudocysts, (after an episode of acute pancreatitis with normal duct anatomy). Type II is also termed as post-necrotic pseudocysts (after an episode of acute on chronic pancreatitis with an abnormal pancreatic duct and often associated with a duct-pseudocyst communication).

Type III is defined as “retention” pseudocysts, (after chronic pancreatitis with strictures and duct pseudocyst communication). (2)
Abdominal CT remains the standard criterion to diagnose pancreatic pseudocysts, other imaging modalities like EUS can help in differentiating pseudocysts from other cystic lesions. (3)

Pseudocyst fluid has high amylase levels and shows inflammatory cells on cytology. ERCP and MRCP are other diagnostic modalities.

Most pseudocysts resolve without interference, initial management of pseudocysts is conservative although some require drainage in case of symptomatic or complicated pseudocysts by the percutaneous catheter-based method.

According to “The rule of 6 of pancreatic pseudocysts” a cyst >6 cm/duration of > 6 weeks and a wall thickness of more than 6 mm requires surgical intervention (4) Surgical drainage has been the traditional approach for pancreatic pseudocysts. However, there is increasing evidence that transgastric and transduodenal endoscopic drainage are safe and effective approaches for patients with pancreatic pseudocysts in close contact (defined as <1 cm) with the stomach and duodenum, respectively. Also, transpapillary drainage can be attempted in pancreatic pseudocysts communicating with the main pancreatic duct. For patients in whom a pancreatic duct stricture is associated with a pancreatic pseudocyst, endoscopic dilation and stent placement are indicated. Surgical drainage is indicated for patients with pancreatic pseudocysts that cannot be treated with endoscopic techniques and for patients who fail to respond to endoscopic treatment.

Definitive treatment depends on the location of the cyst. Pancreatic pseudocysts closely attached to the stomach should be treated with a cystogastrostomy. In this procedure, an anterior gastrostomy is performed. Once the pseudocyst is located, it is drained through the posterior wall of the stomach using a linear stapler. The defect in the anterior wall of the
stomach is closed in two layers. Pancreatic pseudocysts located in the head of the pancreas that is in close contact with the duodenum are treated with a cystoduodenostomy. Finally, some pseudocysts are not in contact with the stomach or duodenum. The surgical treatment for these patients is a Roux-en-Y cystojejunostomy(5)

References


