

## MULTIPLE GIANT PSEUDOCYST OF PANCREAS; A RARE ENTITY

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**DOI No. – 08.2020-25662434**

### Abstract

A pancreatic pseudocyst is defined as a peripancreatic fluid collection contained by a wall of fibrous granulation tissue that does not have an epithelial lining. A pseudocyst with diameter >10cm is termed as a Giant Pseudocyst. Multiple pseudocysts are a much rarer entity ( $\leq 20\%$ ) and have tendency to occur after chronic pancreatitis. A 36-year-old male patient, with a history of chronic and heavy alcohol use, presented with pain and distension of abdomen that was sudden in onset and was associated with early satiety and loss of appetite. CECT of abdomen revealed 2 inter-communicating cystic lesions in the abdomen with the right sided lesion (17 x 10 x 18 cm) pushing the liver and pancreas downwards and left sided lesion (13 x 12 x 11 cm) pushing the spleen downwards and the wall thickness being 1.1 cm. ICD was placed in the Right side in view of associated pleural effusion. After chest optimisation, ICD was removed and patient was taken up for Open Cystogastrostomy through a midline incision. Around 3L of fluid was aspirated. Recovery has been uneventful. Giant pancreatic pseudocysts are a rare entity and earlier drainage is recommended before surgery, although surgical drainage (laparoscopic or open) holds the upper hand in times of complications and clinical deterioration. In our case, open cystogastrostomy was done and the patient had complete and uneventful recovery

**Keywords:** Pancreatitis, Pseudocyst of pancreas, giant, ICD, open cystogastrostomy, multiloculated.

### INTRODUCTION

Pseudocyst of pancreas is defined as a peripancreatic collection of fluid in a cavity lined by fibrous granulation tissue devoid of any epithelium, hence the name, "pseudo". The incidence of pseudocyst formation ranges 16-50% in acute pancreatitis and 20-40% in chronic pancreatitis. Multiple pseudocysts are seen in about 10% of all cases. Successful treatment of single giant pseudocyst has been described in literature but there is no data regarding multiple giant pseudocysts.<sup>(1)</sup> They comprise of 15-30% of all pancreatic cysts and are often seen as a complication to chronic pancreatitis and less commonly from acute pancreatitis.<sup>(2,3)</sup> According to the revised Atlanta classification (2012), pancreatic pseudocysts usually develop with a delay of at least 4 weeks to the initiating event and are characterized by a well-defined inflammatory wall and a homogeneous fluid content without necrosis.<sup>(4)</sup>

A giant pseudocyst is defined when the largest diameter of the cyst is > 10cm.<sup>(5)</sup> Pseudocysts can be asymptomatic or present with varying clinical manifestations ranging from abdominal pain, distension, abdominal lump, early satiety, nausea and vomiting. 33% of pseudocysts are said to spontaneously resolve but giant symptomatic pancreatic pseudocysts require some sort of intervention ranging from external drainage or open / laparoscopic cystogastrostomy. <sup>(6,7)</sup>

Here, we present a rare case report of a multi loculated giant pseudocyst of pancreas in an alcoholic young male adult coming to us with complaints of abdominal lump.

### CASE REPORT

A 34-year-old male with history of heavy alcohol use presented to the ER of a tertiary level University teaching Hospital with complaints of abdominal pain for 10 days. The pain was insidious in onset, dull, aching, non-progressive, continuous and non-radiating. There were associated complaints of abdominal fullness in the epigastric and umbilical region along with early satiety and nausea and vomiting. There were previous complaints of recurrent episodes of abdominal pain. Abdominal examination revealed well defined lump on palpation measuring 12 x 10 cm, spherical and of firm consistency (Fig. 1, 2). Nasogastric tube was inserted and the patient was admitted.

On investigation, serum amylase and lipase were raised 4 times the normal value, leukocyte count was raised with deranged liver function tests. Chest radiography showed bilateral pleural effusion (PE). IV antibiotics were started. CECT of abdomen showed multiloculated communicating pseudocyst of pancreas measuring 12 x 17 x 18 cm (1200cc) and 13 x 11 x 11 cm (900cc) in the epigastric and left hypochondriac region displacing liver and spleen respectively (Fig. 3, 4). Both the collections were connected superiorly with wall thickness of 11mm. pancreatic body and tail was atrophic with ductal dilatation. After 1 week of conservative management patient's chest condition worsened. Repeat CECT showed increase in the size of the 2<sup>nd</sup> pseudocyst (13 x 15 x 16cm = 1560cc) associated with increase in right sided PE. Thoracocentesis was done and after pleural fluid analysis was done s/o transudative type. ICD was inserted on the right side and chest optimisation was started. CT scan demonstrated the extent of the giant pancreatic pseudocyst, which indicated surgical intervention, given the patient's highly symptomatic status.

An open cystogastrostomy was performed in view of the position of the pseudocyst with respect to the stomach. Through a midline incision peritoneum was opened. The stomach was found compressed between the pseudocyst and anterior abdominal wall. Around 2 litres of murky pancreatic fluid collection were aspirated from pseudocyst. The 2<sup>nd</sup> cyst was extending till the splenic hilum laterally. HPE of cyst wall revealed "cystic structure without epithelial lining containing fibro collagenous tissue with inflammatory infiltrates comprising of neutrophil and lymphocytes with associated areas of haemorrhage". Given the proximity of the pseudocyst to the posterior wall of the body of the stomach, a cystogastrostomy was performed (Fig. 5-10), in which the wall of the pseudocyst was anastomosed with the posterior wall of the stomach using silk suture. Connell repair of the anterior wall of stomach was done.

Post-operatively patient recovery was uneventful, with drains removed on POD 8 and 12. Sutures were removed after 14 days. Patient was discharged after 18 days. On follow up, patient had no new complaints and adequate weight gain with a normal sonography of the abdomen.

### DISCUSSION

A pancreatic pseudocyst is an encapsulated collection of homogenous fluid with little or no necrotic tissue within it. It is usually well circumscribed and located outside of the pancreas, often in the lesser sac. Disruption of the main or ductal branches of the pancreatic duct gives rise to collection of pancreatic secretions in the peripancreatic tissues. Surgical intervention is indicated generally in giant (>10 cm) or symptomatic pseudocysts. <sup>(8)</sup>

Pancreatic pseudocysts' incidence is low, occurring in about 0.5-1/100000 adults per year. This

figure drastically increases in patients with acute pancreatitis (5-16%) and chronic pancreatitis (20-40%).<sup>(9)</sup> Studies have showed that alcohol consumption is the single most important contributing risk factor in patients with chronic pancreatitis.<sup>(10)</sup> Present literature reports only a handful of cases of giant pancreatic pseudocysts with a higher prevailing morbidity and mortality when compared to small pseudocysts. This calls for early external or internal drainage before the onset of complications.<sup>(11)</sup>

The clinical manifestations due to pseudocyst of pancreas vary according to the size and the anatomical position of the pseudocyst. Vague abdominal pain, distension, abdominal lump, nausea and vomiting, early satiety, anorexia, weight loss are few symptoms the patient is going to complain of. Management of pancreatic pseudocyst may be: conservative or invasive (surgical).<sup>(12)</sup> It is generally advised to go about the treatment of such cyst in a “step-up approach” regarding the choice of surgical intervention.

Till date there are no specific indicators that can reliably predict the course of disease in an established case of pancreatic pseudocyst although few surgeons prefer to still follow the “**Rule of 6**” (6 weeks of conservative approach is adequate for the cyst to spontaneously resolve and / or for the cyst wall maturation to hold the sutures in place).<sup>(13)</sup> Surgical intervention can either be: external drainage or internal drainage. External drainage may be done endoscopically or through percutaneous route. Studies have reported success rates of endoscopic drainage of 60-90 % and that of surgical internal drainage being 94-99 %. Due to being less invasive, endoscopic drainage may be preferred over surgical drainage whenever clinically feasible.<sup>(14)</sup> Percutaneous approach however, carries a high risk of recurrence or percutaneous pancreatic fistula.<sup>(15)</sup> Studies have also reported no significant advantage of endoscopic over surgical drainage both in terms of post-operative outcome and complications.<sup>(16,17)</sup>

Internal (surgical) drainage furthermore, can be of open type or laparoscopic. Studies have shown that laparoscopic approach to a large and persistent retrogastric pseudocyst is associated with a smoother and more rapid recovery and shorter hospital stay. Although it also carries the disadvantage of inadequate drainage and steep learning curve and expertise.<sup>(18)</sup> The choice of type of internal drainage is determined mainly by the anatomy and topography of the pseudocyst.<sup>(19)</sup>

In cases where the pseudocyst is located in the epigastric region and / or adhered to the stomach, cystogastrostomy is the method of choice with the added advantage of continuous postoperative drainage through a Ryle’s tube. However, chances of complications like infection due to gastric and pancreatic contents pooling in the dependent part of cystic cavity, may further lead to abscess formation and / or sepsis.<sup>(19)</sup>

In conclusion, multiloculated giant pancreatic pseudocysts are indeed a rare entity with varying clinical presentations and management preferences. Present literature reports only a handful of cases of a multiloculated giant pseudocyst of pancreas. In view of the location, extent and symptoms, we performed an open technique of cystogastrostomy in this case of a giant pancreatic pseudocyst.

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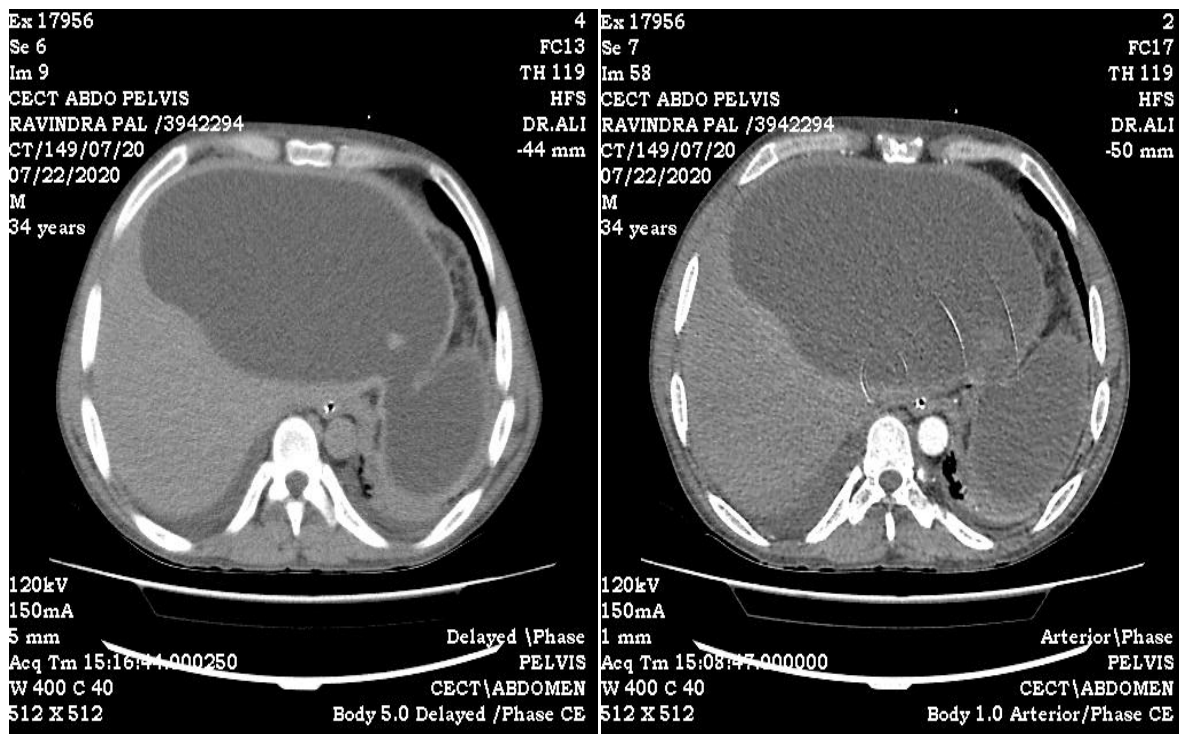
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FIGURES



Fig. 3: CECT abdomen showing multiloculated giant pancreatic pseudocyst (communication indicated by arrow)

Fig. 1,2: Position of lump



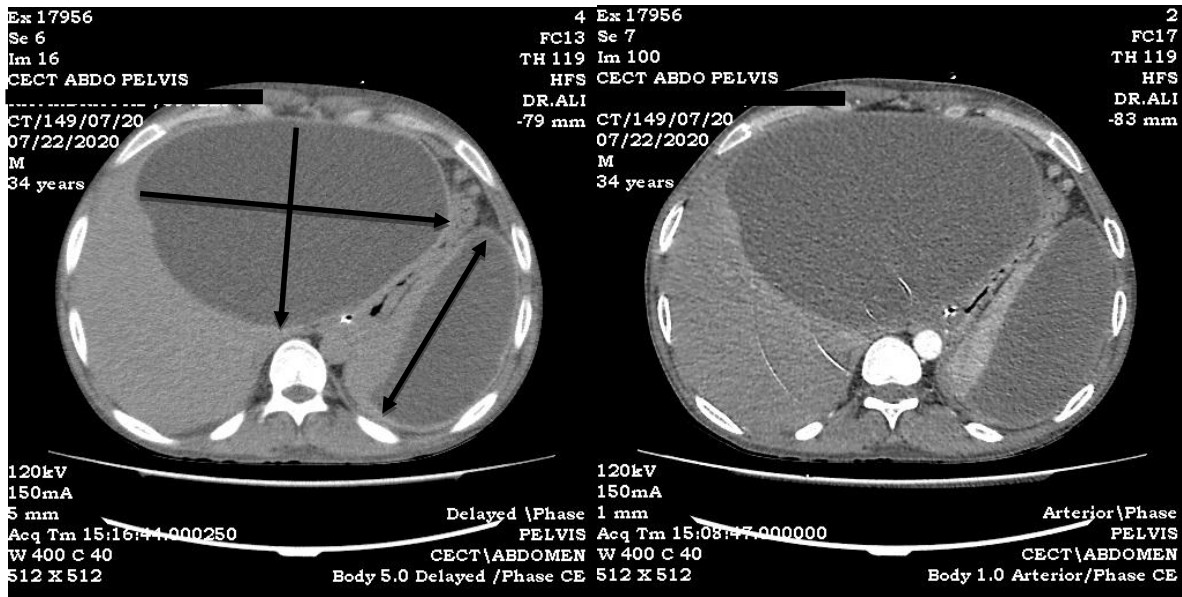


Fig. 4: Multi-loculated giant pseudocyst of pancreas

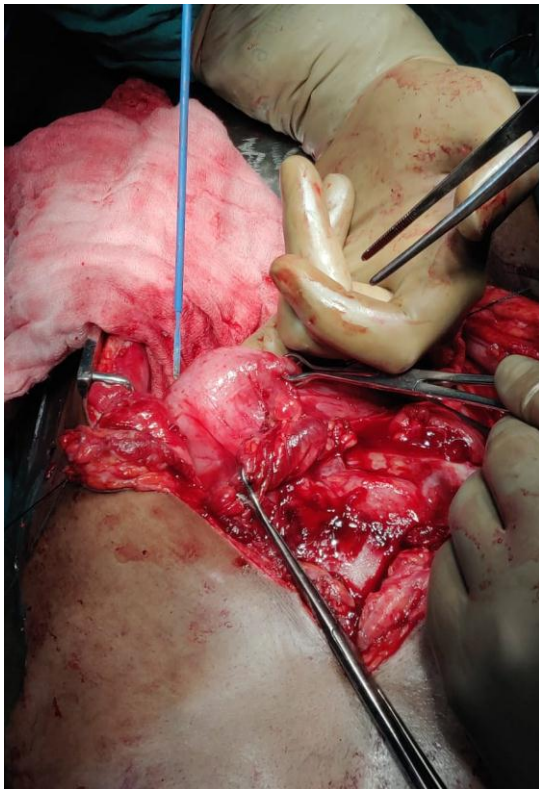


Fig. 4: Anterior wall of stomach (indicated by arrow)

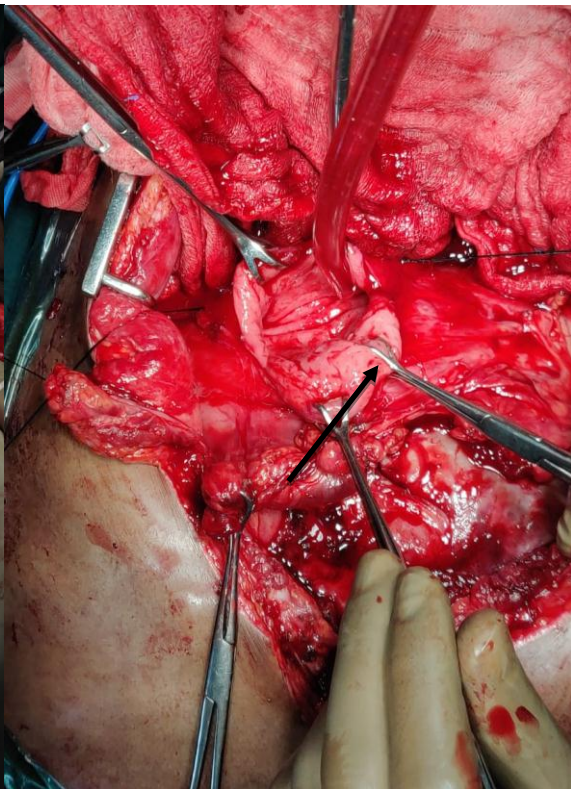


Fig. 5: Posterior wall of stomach (indicated by arrow)

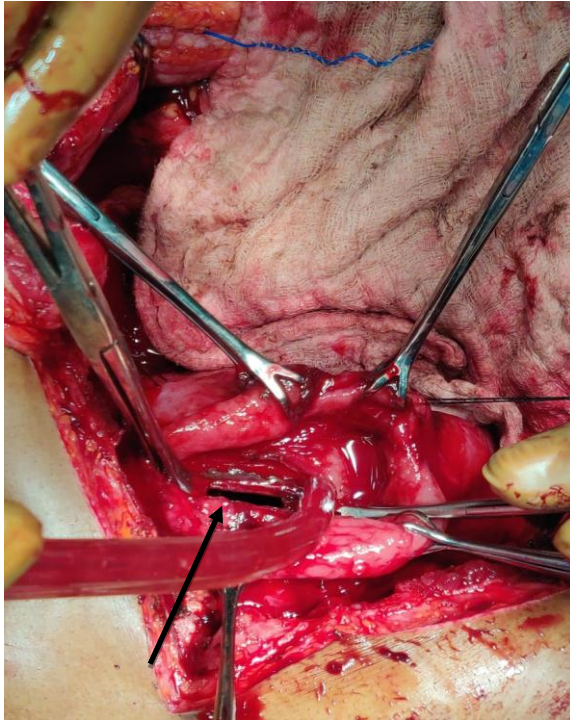


Fig. 6: Cyst wall opened and drained through (indicated by arrow)



Fig. 7: Cyst wall anastomosed with posterior gastric wall

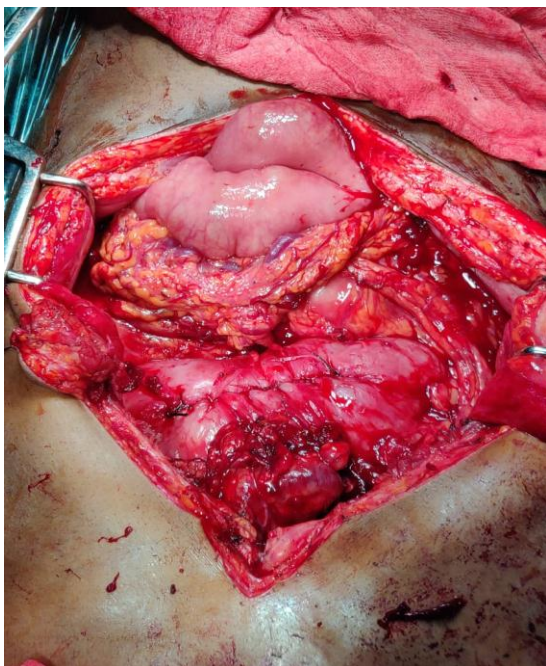


Fig. 8: Connell double layer closure of anterior gastric wall  
Wall of stomach

#### DECLARATIONS

- Funding: Not applicable
- Conflict of Interest: Not applicable
- Availability of data and materials: IPD patient in MGM Medical College and Hospital
- Code Availability: Not applicable