

Open Surgical Management of Pancreatic Pseudocyst -Case Series

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Abstract: Pancreatic pseudocysts occur in up to 10% of patients with acute pancreatitis and in 20 to 38% of patients with chronic pancreatitis. Surgical management of pancreatic pseudocysts has been the cornerstone of the management of symptomatic cases. Surgical internal drainage of pancreatic pseudocysts is commonly performed safely with low morbidity and mortality. This study is being done to study the various open surgical techniques for management of pseudocyst of pancreas, their indications and to study the intra operative time, intra operative bleeding, in hospital stay and postoperative complications for each procedure

Keywords: Pancreatic pseudo cyst, pancreatitis

1. Introduction

Pancreatic pseudocysts are circumscribed collection of fluid rich in pancreatic enzymes, blood and necrotic tissue typically located in lesser sac and they account for 75% of all pancreatic masses. They occur in up to 10% of patients with acute pancreatitis, and in 20 to 38% of patients with chronic pancreatitis, and thus they comprise the most common complication of chronic pancreatitis.

The presenting symptoms are abdominal pain, epigastric fullness and mass, obstructive jaundice, early satiety, nausea and vomiting, of which abdominal pain is the most common and accounts for 76 to 94% of the presenting symptoms.

Imaging modalities include demonstration of elevated amylase and reduced CEA in cystic fluid, Ultrasonography, computerized tomography, magnetic resonance imaging, ERCP and endoscopic ultrasound.

Treatment includes conservative management and surgical drainage procedures namely percutaneous drainage, endoscopic drainage and surgical interventions including internal drainage procedures like cystogastrostomy, cystojejunostomy and cystoduodenostomy.

Surgical management of pancreatic pseudocysts has been the cornerstone of the management of symptomatic cases. Internal drainage of pancreatic pseudocysts is commonly performed safely with low morbidity and mortality. Although minimally invasive techniques now offer a variety of treatment options, open surgical drainage is still indicated in a significant number of patients and the choice of surgical procedures depends upon the size, number, location of cyst, etc. Recently endoscopic retrograde cholangiopancreatography played a dominant role in evolution of surgical treatment.

2. Methods

The study was a prospective study included 30 patients pseudocyst of pancreas undergoing open surgical

management between Oct 2015 to Aug 2017. Patients were divided equally into three groups-

- Group 1 - open cystoduodenostomy
- Group 2 - open cystogastrostomy.
- Group 3- Roux-en-Y open cystojejunostomy

3. Result

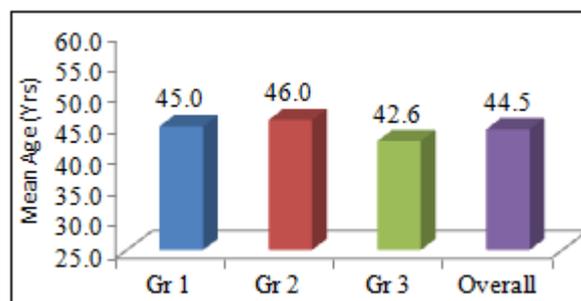


Figure 1: Mean age in three groups

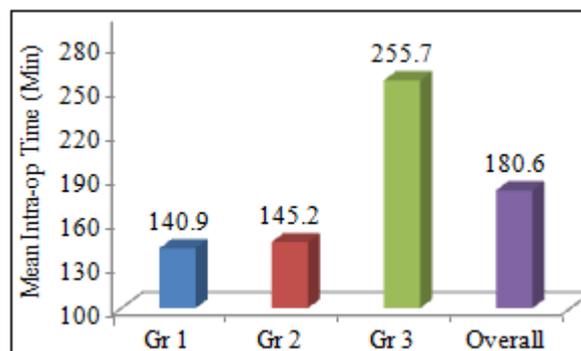


Figure 2: Intra-operative Time (min) in three groups

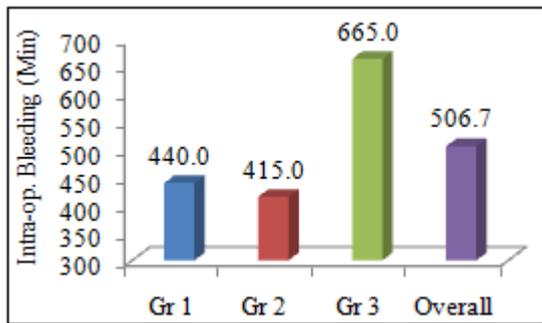


Figure 3: Mean Intra-operative Bleeding (ml) in three groups

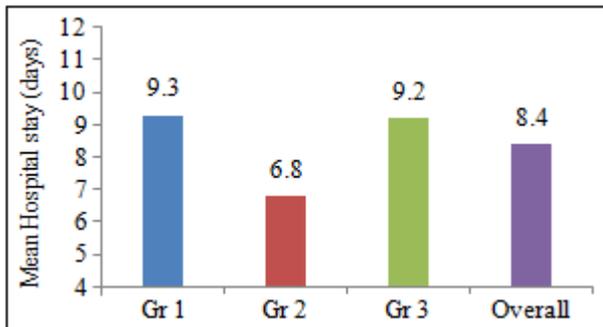


Figure 4: Average Hospital stay in three groups

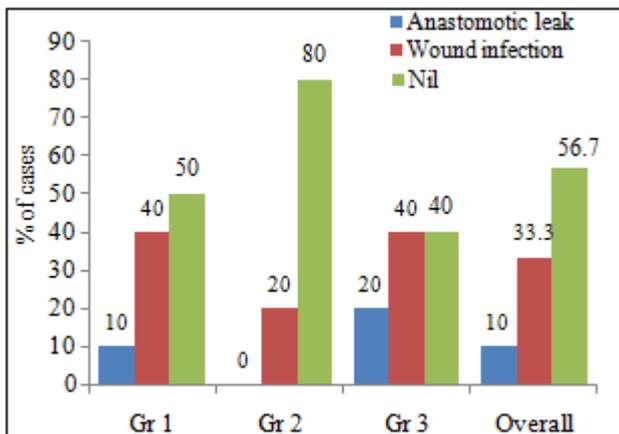


Figure 5: Post-op complications in three groups

4. Discussion

Pancreatic pseudocysts are a known complication of acute and chronic pancreatitis. Chronic pseudocysts over 8 weeks are less likely to resolve spontaneously and, as the risk of complications increases with time, treatment of large pseudocysts should not be postponed. Introduction of new and sensitive imaging techniques permits the detection of more pancreatic cystic lesions with better evaluation of adjacent structures. Exact classification of pseudocysts is an important factor for both the determination of the actual number of pseudocysts and the implementation of therapeutic strategies.

Overall incidence is common in males of upto 80%. Maximum incidence is seen in the age group of 41 to 50 years. Surgery is the traditional modality for treating pancreatic pseudocysts, with high success rates and low morbidity and mortality, and it still plays an important role in therapy. Morbidity and mortality from cystogastrostomy

and cystojejunostomy were comparable. However cystoduodenostomy is associated with increased morbidity. The choice of open surgical procedure depends upon the location of the pseudocyst of pancreas, its contents and the general condition of the patient. In general open surgical procedure is indicated. However the indications for open surgical procedure of internal drainage (open cystogastrostomy, open cystoduodenostomy and roux-en-y open cystojejunostomy) in our study are patients diagnosed with matured pseudocyst of pancreas i.e. duration of pseudocyst more than 6 weeks for acute pancreatitis and longer duration for chronic pancreatitis, wall thickness more than 6mm and size of pseudocyst more than 6cm (size varied from 6cm to 16cm) using ultrasound abdomen and computerized tomography excluding neoplastic lesions of pancreas, hydatid cyst of pancreas, congenital cyst of pancreas, highly infected pseudocyst and patients with comorbidities like ischemic heart diseases and uncontrolled bronchial asthma. Cystogastrostomy is preferred in Symptomatic or very large pseudocysts of the pancreas adherent to the posterior wall of the stomach, i.e., the posterior wall of the stomach form the anterior wall of the pseudocyst. Cystoduodenostomy is limited to the pseudocyst in the pancreatic head or uncinata process that lie within 1cm of duodenal lumen. Cystojejunostomy is preferred in pseudocyst not adhering to the posterior gastric wall in any location in the pancreas – head, body, or tail or Pseudocysts that bulge through the transverse mesocolon.

5. Conclusion

Pancreatic pseudocysts are a known complication of acute and chronic pancreatitis most common cause in males is alcohol abuse and in females is gall stone disease Surgery is the traditional with high success rates and low morbidity and mortality. Open cystogastrostomy is quicker with less blood loss, decreased hospital stay and lower post operative complications

References

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- a) Complicated pseudocysts, i.e. infected and necrotic pseudocysts;
 - b) pseudocysts associated with pancreatic duct stricture and a dilated pancreatic duct;
 - c) Suspected cystic neoplasia;
 - d) Coexistence of pseudocysts and bile duct stenosis; and
 - e) Complications such as compression of the stomach, duodenum or the biliary tree, perforation and hemorrhage due to erosion of arteries or pseudoaneurysms