

An Experience of Management of Pancreatic Pseudocysts

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ABSTRACT

Pancreatic pseudocysts are common sequelae of acute pancreatitis. Internal drainage of the cyst has been gold standard procedure if these cysts do not respond to conservative measures. Open drainage of cyst also helps to determine the etiology of cyst which may be wrongly taken as acute pancreatitis. The biopsy of cyst wall may rule out malignancy and modify the treatment in certain patients. New procedures eg. endoscopic and laparoscopic are less invasive and are offering new promises. In this study an experience of management of pseudocyst of pancreas is discussed. Out of fourteen patients, twelve were managed by surgery. Acute pancreatitis was the commonest aetiology. Only two patients were managed by ultrasound guided aspiration. There was no mortality in this study.

Key words pseudocysts, pancreas

INTRODUCTION

Acute pancreatitis, in ten Percent of the patients is followed by development of pseudocyst¹. This may require an active management in 50-70% of cases². The formation of cystic fluid collection, although a less serious complication of this serious condition prolongs the morbidity of the patient. The patients suffering from this complication may be under the care of physicians, gastroenterologists or surgeons. It often becomes difficult sometimes, to decide whether to treat this condition by conservative measures or surgery. The intervention may be in the form of ultrasound-guided aspiration or it requires surgical drainage internally or externally³. Amongst the cystic lesions of the pancreas, pseudocysts are most frequent^{4,5}. Pseudocyst of pancreas results due to localized collection of fluid in the lesser sac secondary to pancreatic inflammation, trauma or duct obstruction⁶. The other common types of cystic lesions of pancreas are serous cystadenomas, mucinous cystic neoplasms, adenocarcinomas and intraductal papillary mucinous cystic neoplasms, adenocarcinomas and intraductal papillary mucinous tumours⁷. It has been found that pseudocyst may present to the clinician without any prior history of pancreatic disease⁴. The histological differentiation centers on the fact that pseudocyst lacks an epithelial lining⁶. The cyst because of its pressure effects causes lot of discomfort to the patient and this may require an immediate attention. Such cysts have been traditionally managed by open surgical drainage either internally or externally. Since the advent of interventional ultrasonography and minimal access surgery, these cysts can be aspirated or drained internally by endoscopic or laparoscopic means³.

There is a continuous debate about the superiority of these procedures in terms of being safe, less traumatic and having least recurrence rate⁸.

It is mentioned in the literature that the open surgical drainage of the pseudo-pancreatic cysts must involve taking a biopsy of the cyst wall, thorough lavage and sequestrectomy of the necrotic pancreas³. Differentiation of pseudocysts from other cystic lesions is important, as the symptoms may be entirely vague and may not point to acute pancreatic⁹. There is a tendency amongst surgeons to presume that all cystic lesions of the pancreas are pseudocysts. Following acute pancreatitis It is also reported that one third of patients with neoplastic cysts were initially diagnosed and treated as pseudocysts⁶.

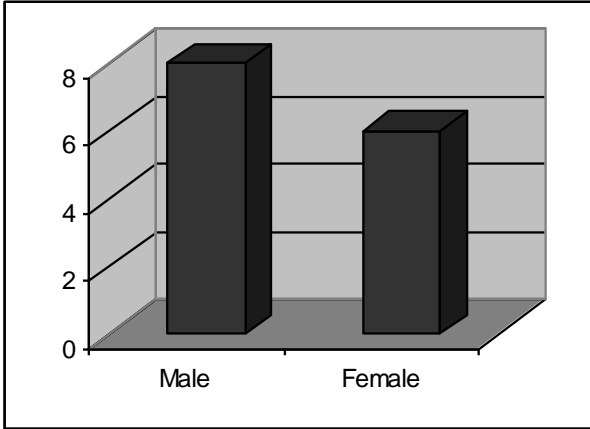
MATERIALS & METHODS

The patients undergoing surgical management of pseudocyst of pancreas from June 2001 to June 2003 at Mayo Hospital and Jinnah hospital Lahore were included in the study. Their history, operation notes and post operative course were reviewed. A proforma regarding their mode of presentation, investigations, ultrasound, CT, ERCP report, detail of the procedure and outcome was filled up. All the cases were managed by one consultant only. The ultrasound-guided aspiration was performed by consultant radiologist. The biopsy reports were reviewed. There were no specific inclusion or exclusion criteria.

RESULTS

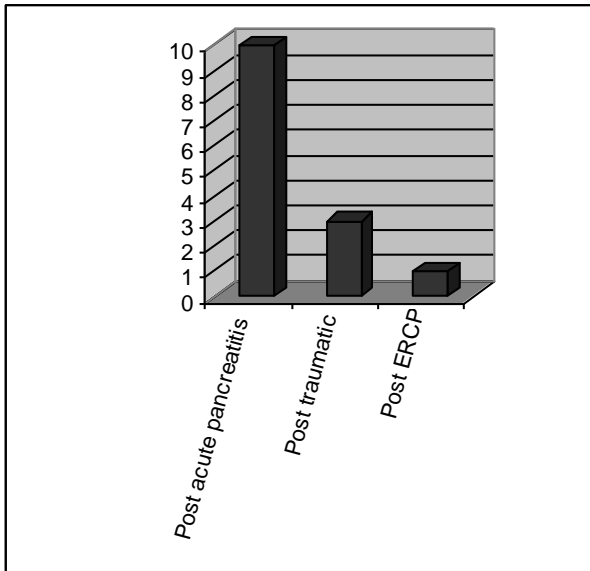
There were Fourteen patients diagnosed clinically and radiologically to have pseudocyst of pancreas. There were 8 males and 6 females with an average age of 55 years (range 43-65)

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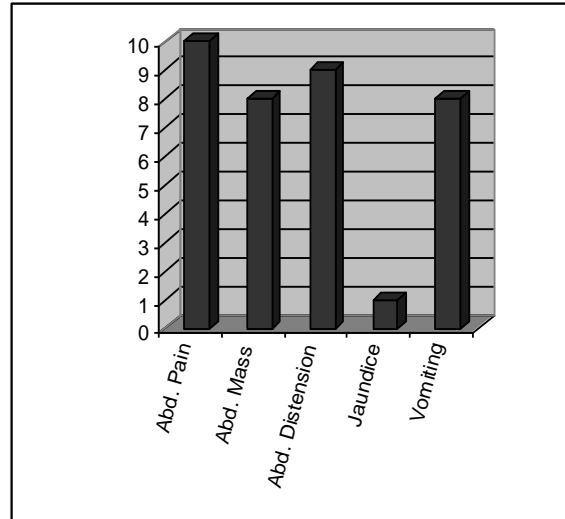
The pseudocyst formed as a complication after following conditions; in 10 patients (71.4%) etiology was in acute pancreatitis, out of which 8 patients (80%) had biliary pancreatitis and 2 patients (20%) the cause was idiopathic. 3 patients had history of trauma (21.4%) and 1 patient (7.14%) developed it after ERCP.

Aetiology



Out of 14 total patients, 10 patients (71.4%) presented with abdominal pain, 8 patients (57.1%) with abdominal mass, 9 patients (64.2%) with abdominal distention, 1 patient (7.14%) with jaundice and 8 patients (57.1%) with vomiting as illustrated in figure.

Symptomatology



Ultrasound & CT Scan evaluation

The average size of the cyst being operated was **8.5cm.**

Maximum size 13cm

Minimum size 06 cm

Average size 8.5 cm

Duration between diagnosis and intervention

Minimum 10 days

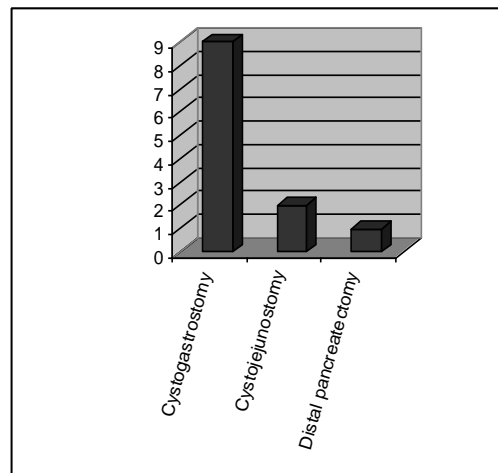
Maximum 150 days

Procedures performed

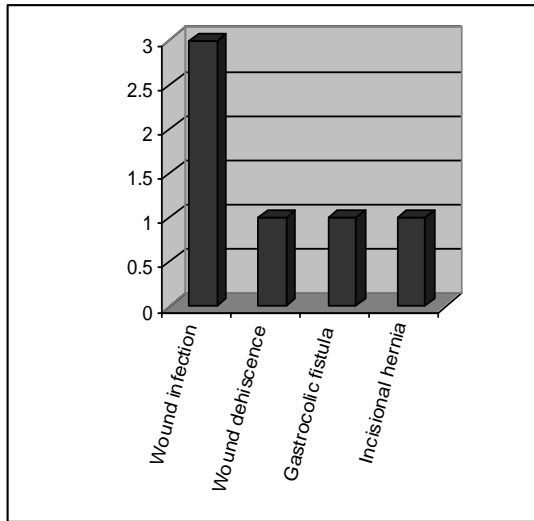
Surgery 12

Ultrasound guided aspiration 02

Distribution of surgical procedures



Complications



DISCUSSION

This study although small reflects that there is low incidence of this disease in our community and also in other Asian countries. Acute pancreatitis, almost in all cases results in acute fluid collection in the lesser sac, which may get resolved over a period of time without any need for intervention¹⁰. The majority of the cysts, which grow in size, pose a great problem to the clinician regarding their management. The physicians usually wait for the cyst to resolve unless it becomes symptomatic. The patient during this period are continuously followed up by ultrasound examination. The size has been the main determinant for the definitive treatment but the current literature suggests the old 6 cm or 6 week old criteria for intervention should be relative than an absolute indicator. The asymptomatic cysts can be safely observed regardless of their size¹⁰. A strong suspicion of malignancy is an indication for surgical intervention¹¹. The other indications of surgical intervention are, an increase in size of more than 7.5 cm and development of symptoms indicative of an impending rupture, hemorrhage and infection³. An acute pseudocyst should be allowed to mature for 4-6 weeks. This period of observation renders the cyst suitable for internal drainage. The site of pseudocyst is an other important parameter which helps the surgeon to decide on the method of internal drainage. The cysts, which are retrogastric, are best drained by posterior cystogastrostomy. Those around the head of pancreas close to the duodenum can be easily drained by cystoduodenostomy. Large cysts, which enlarge through and bulge inferiorly into the transverse mesocolon are best drained by cystojejunostomy with Roux en Y anastomosis. Those located in the tail of pancreas or the body are

technically amenable to a resection entailing distal pancreatectomy with or without splenectomy. The open surgical drainage is a gold standard which yields excellent results^{12,13}. During surgery it is imperative to examine the pancreas for establishing the diagnosis and selecting the right treatment¹⁴. The pseudocysts of pancreas tend to adhere to the adjacent visceral surface and the surrounding pancreas is indurated. Where as neoplastic cysts tend to have a glistening wall and the pancreas adjacent to the cyst has a normal look and texture⁶. The postoperative morbidity is low (28%) and recurrence is uncommon(10%) with little mortality (1.5%) if surgery is performed electively¹³. The possibility of a cystic pancreatic neoplasm can also be reliably excluded by biopsy of the cyst wall which should be generous and multiple¹⁵. This can be achieved if frozen section facility is available. The pancreatic cystic tumors, are malignant or carry a malignant potential¹⁶. They have been repeatedly diagnosed and treated as pseudocysts with grave consequences. Hence a cyst wall biopsy could not be overemphasized. In addition, open surgery offers the opportunity to perform pancreatic sequestrectomy that seems to prevent postoperative retroperitoneal septic complications¹⁷. In this series open surgery was the principal treatment offered to 12 patients (85.7%). There was no mortality in the series, while morbidity and recurrence rates compared favorably with the reported figures. This conventional approach has been questioned by newer and less invasive methods. The simplest form is percutaneous catheter drainage. The indiscriminate use of this technique has fell into disfavour due to the higher mortality and morbidity rates and longer hospital stay compared to surgical drainage¹⁸, in addition to the potential of missing a cystic neoplasm, as no cyst wall biopsy is possible¹⁹. This also omits pancreatic sequestrectomy which may be essential. Another novel technique is the endoscopic drainage which has been reported to have a higher success rate with low morbidity^{20,21,22}. Again, we have the concern that a reliable cyst wall biopsy may not be possible as dictated by the small diameter of the biopsy channel. Added to this, is the omission of pancreatic sequestrectomy. In this era of minimal access surgery laparoscopic techniques have become popular creating a field where laparoscopic cystogastrostomy and cystojejunostomy have been performed^{23,24,25}. These techniques have the potential of providing cyst wall biopsy and performing thorough pancreatic necrosectomy. However there are no standardized techniques for laparoscopic drainage. Moreover, controlled trials comparing the results of laparoscopic and open surgery have not yet surfaced and it is

probable that the benefits conferred to laparoscopic over open surgery are speculative at present. Although the mortality, morbidity, and the recurrence rates of our series are comparable to reported figures, the length of hospital stay seems to be long. Certainly, this needs to be addressed in the future studies.

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