



A Study of Etiology and Surgical Management of Pseudocyst of Pancreas

KEYWORDS

Pseudocyst , cystogastrostomy, cysto jejunostomy, cysto duodenostomy , percutaneous aspiration , CECT, MRI.

* Dr.Ashok Chintamani

Associate professor, Osmania medical college, Hyderabad.
* CORRESPONDING AUTHOR

Dr.Raju Bakka

UPGRADED DEPARTMENT OF GENERAL SURGERY, OSMANIA GENERAL HOSPITAL/OSMANIA MEDICAL COLLEGE, HYDERABAD, TELANGANA STATE

Dr.Santhivardhani

UPGRADED DEPARTMENT OF GENERAL SURGERY, OSMANIA GENERAL HOSPITAL/OSMANIA MEDICAL COLLEGE, HYDERABAD, TELANGANA STATE

Dr.Ravindrababu Katamaneni

UPGRADED DEPARTMENT OF GENERAL SURGERY, OSMANIA GENERAL HOSPITAL/OSMANIA MEDICAL COLLEGE, HYDERABAD, TELANGANA STATE

ABSTRACT Pseudocyst of pancreas is common complication of acute and chronic pancreatitis. Accurate diagnosis , timely management are important to prevent complications .Pseudocyst account for 75% cystic lesions of pancreas. Upto 50% pancreatic pseudocysts will develop symptoms. This study is to evaluate the etiological factors responsible for the formation of pseudo cyst of pancreas and its surgical treatment.

INTRODUCTION:

Pseudocyst of pancreas is a complication of acute and chronic pancreatitis. Pseudocyst of pancreas is collection of fluid and composed of collagen and granulation tissue, not lined by epithelium. The capsule of pseudocyst contains thin fibrous tissue which can progressively thicken as pseudo cyst matures. The fibrotic reaction typically requires at least 4-8 weeks to develop.

The characteristic features of pancreatic pseudocysts include high amylase levels associated with absence of mucin and low carcinoembryonic antigen (CEA) levels. (1)

The main etiology of pseudocyst pancreas are alcohol abuse , gallstones, trauma, drugs, idiopathic. The symptoms may vary depending on location and size of cyst. The main symptoms are pain abdomen, early satiety, mass abdomen , nausea, weight loss and jaundice. Diagnosis confirmed by analysis of pancreatic enzymes , ultrasound abdomen, CECT abdomen, MRI.

The treatment depends on symptoms and size and location of cyst. If the size of cyst is less than 4cm and without pancreatic duct obstruction, it can be treated conservatively. For patients who have pancreatic duct obstruction with pseudocyst are treated with Endoscopic dilatation and drainage with stent placement. (2)

Surgical treatment is indicated for patients who were failed endoscopic treatment. The definitive treatment depends on the location of cyst.

1. If the cyst is in contact with stomach –cysto gastrostomy.
 2. If the cyst is in located in head of the pancreas and close contact with duodenum.
 3. If the cyst is not in contact with stomach and duodenum-cysto jejunostomy
 4. If the cyst is infected-percutaneous drainage
- The complications of pseudocysts are infection, bleeding, rup-

ture, obstruction of pancreatic duct, pancreatic pleura fistula.

MATERIALS AND METHODS:

This is a prospective study and 28 patients were selected , who were admitted in elective and emergency wards in Osmania General hospital, Hyderabad during July 2014 to February 2016.

INCLUSION CRITERIA:

1. Patients who had confirmed diagnosis as pseudocyst of pancreas by various investigations.
2. Patients of all age groups.

EXCLUSION CRITERIA:

1. Non operative treatment like endoscopic drainage and stents are excluded.
2. All neoplastic cystic swellings and mass of pancreas.
3. Congenital cysts of pancreas and true cysts are excluded.
4. Malignant masses are also excluded.

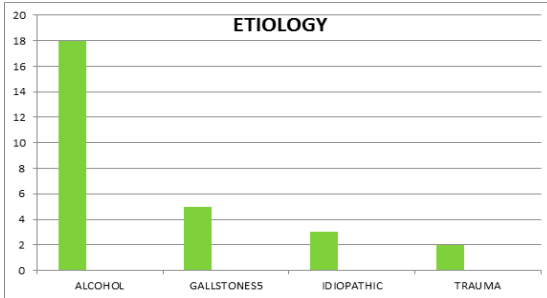
DISCUSSION AND ANALYSIS:

The study includes both adult and paediatric age group. In total 28 patients 24 were male, 4 were female . We collected data from all pseudocyst patients admitted in surgical units in Osmania general hospital, Hyderabad. We analysed data for evaluation of etiological factors like alcohol abuse and duration, trauma history, gallstone, drugs, previous surgeries etc. All patients were followed upto 3 months after the discharg. The results are tabulated. Alcohol which is the most common etiological factor in our study is compared with studies of V.Ustoff et al (3) and Bodil Anderson(4).

The etiological factors observed in our study:-

ETIOLOGY	NO OF CASES	PERCENTAGE
Alcohol	18	64.2%
Gall stones	5	17.8%
Idiopathic	3	10.7%
Trauma	2	7.1%

The most common cause is alcohol.



Comparison with V. Ustoff et al and Bodil Anderson studies

Etiology	V.Ustoff et al	Bodil Anderson	Present study
Alcohol	71.42%	65%	64.2%

TREATMENT:-

The treatment options were according to symptoms, size and location of cyst.

1. If the size of cyst is less than 4cm without duct obstruction. It is treated conservatively.
2. Cystogastrostomy, cystoduodenostomy and cysto jejunostomy are the surgical treatments.
3. Percutaneous aspiration if cyst is infected.

The treatment complications were considered as morbidity in the form of wound infection and recurrence in our study. The results are tabulated and compare with Adams and Marsion study(5).

PROCEDURE	NO OF CASES	MORBIDITY	PERCENTAGE
Conservative	4	0	0%
Cystogastrostomy	13	2	15.3%
Cystoduodenostomy	1	0	0%
Cystojejunostomy	6	1	16.6%
Percutaneous aspiration	4	2	50%

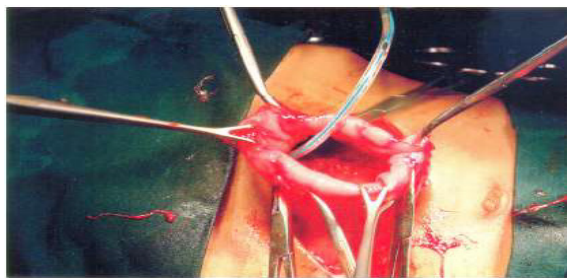


Fig:1 Cystogastrostomy

Procedure	Adams and Marsion	Present study
External percutaneous drainage	48%	50%
Internal drainage (surgical)	16%	15-17%

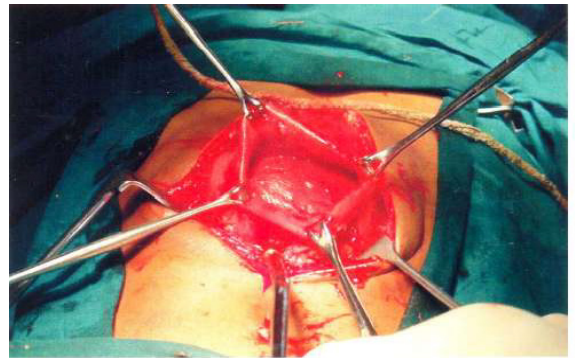
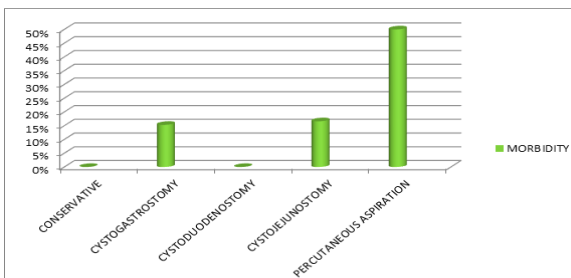


Fig: 2 Pseudocyst of pancreas after opening of anterior-wall of stomach

Findings:

1. The most common etiological factor is alcohol. Second most common is gallstones.
2. Most common age group is 30- 50 yr. Males were affected more common.
3. Most common presentation is pain abdomen .
4. Diagnosis usually confirmed by ultrasound abdomen and CECT abdomen.
5. Less than 4cm cysts resolved spontaneously by conservative management.
6. Cystogastrostomy and Cystojejunostomy have comparable morbidity and recurrence.
7. Percutaneous aspiration has high morbidity in the form of infected cyst and recurrence.

Conclusion:

The most common etiological factor for Pseudocyst of pancreas is alcohol consumption. Although the treatment options depended on various factors, the internal drainage procedures like cystogastrostomy, cystoduodenostomy and cystojejunostomy are better when compared to external percutaneous drainage was observed in our study.

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