



SURGICAL COMPLICATION OF ACUTE PANCREATITIS.

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KEYWORDS : Complications, Pancreatitis**INTRODUCTION**

Acute pancreatitis, since long, has been an important cause of morbidity and mortality in our country and elsewhere. With an increasing incidence in alcoholism and biliary diseases, the major etiological factors, the incidence of Acute pancreatitis is expected to increase. Acute pancreatitis (AP) is a common acute medical condition requiring emergent care. Yet, no prevalence data are available from India. Gallstones and alcohol are the most common causes of AP, gallstones being about twice as common as alcohol in our population.

Most of the initial studies on acute pancreatitis was based on biliary etiology. But later on alcoholism was found to be a significant etiological agent especially in males. Geographical variations are noted in the etiological factors described with most of the recent European studies show biliary etiology to be predominant compared to the Asian studies show alcohol as the more significant etiological factor.

Overall mortality has reduced since the institution of early diagnostic techniques and effective conservative management.

This condition is well known for its recurrence and development of a large number of abdominal complications like ascitis, pseudocyst, necrosis, abscess, venous thrombosis and aneurysms, and intestinal complications, which may require surgery.

In our experience acute pancreatitis is on a rise with a significant number of patients presenting to the OPD and Casualty. The present study is to evaluate the age, sex, various etiological factors associated with acute pancreatitis, the clinical presentations, diagnostic modalities and treatment of the same. This study is also intended to evaluate the various surgical complications that develop in these patients, diagnosis and management of these complications.

AIMS AND OBJECTIVES

1. To study the incidence of surgical complications developing in patients diagnosed as Acute pancreatitis.
2. To evaluate the various treatment modalities for these complications.

SURGICAL COMPLICATIONS IN ACUTE PANCREATITIS

1. Acute fluid collections & Pancreatic ascitis
2. Pancreatic necrosis
3. Acute Pseudocyst
4. Pancreatic abscess
5. Venous thrombosis
6. Haemorrhage & Pseudoaneurysm
7. Paralytic ileus

MATERIAL AND METHOD

Surgical complication and management' is a prospective study of 98 patients who were admitted at a tertiary care hospital over a period of One and half years with Acute pancreatitis.

Inclusion Criteria:

1. All cases of clinical Acute pancreatitis with elevated Serum Amylase & or Serum Lipase.
2. Age of patient – 13 to 65 years
3. All cases of Acute abdomen with Ultrasound / CT / MRI scan features suggestive of Acute-pancreatitis

Exclusion Criteria:

1. Patient below the age of 13 years.
2. Patients who are found to be suffering from cardiovascular, respiratory and systemic failure previously.

METHOD OF COLLECTION OF DATA

Patient data was collected from all patients attending general Surgery OPD, Casualty and inpatient department.

- Serum Amylase and Lipase were investigated immediately on presentation.
- Preliminary Ultrasound of Abdomen and Pelvis was done on the same day of presentation.
- Patients were put on conservative line of management.
- Patients were followed up daily clinically and Serum amylase was repeated on the 3rd day.
- Repeat Ultrasound /CT/MRI Abdomen & pelvis was done if patient's condition remained the same or deteriorated.
- If the patient developed any of the above mentioned complications such patient's were evaluated for medical/ surgical management of the same complications.
- Patients were informed about any surgical procedure and consent was taken for the same.

Follow up of patients:

Patients were followed up for a period of 6 months every month after discharge, for recurrent attacks or development of complications.

RESULTS

Ninety eight cases of Acute pancreatitis admitted at a tertiary care hospital, were taken up for study to evaluate the course of the disease and the development of surgical complications and management of the same.

Data was collected and analysed.

Table 1 : Age distribution

Age In Years	No. Of Patients	%
13-20	9	09.2
21 - 30	27	27.6
31 - 40	24	24.5
41 - 50	25	25.5
51 - 60	10	10.2
61 - 70	03	03.1
Total	98	100

Table 2 : Gender distribution

Gender	No. of Patients	%
Male	82	83.7
Female	16	16.3
Total	98	100

Table 3 : Symptoms

Symptoms	No. of Patients	%
Pain	96	97.9
Vomiting	79	80.6
Fever	19	19.4

Table 4 :Type of Complications

Type of Complication	No.Of Patients (n= 98)	%	95%CI
Paralytic Ileus	43	43.9	34.47-53.76
Peripancreatic Collection	13	13.3	7.92-21.38
Necrosis	11	11.2	6.38-18.58
Pseudocyst	10	10.2	5.64-
Thrombosis	1	1.0	17.77

Table 5 : Single / Multiple Surgical Complications

Surgical Complication	No.Of Patients (n= 53)	%	95%CI
Single	39	73.6	60.42-83.56
Double	5	9.4	4.10-20.26
Multiple	9	16.9	9.20-29.3

DISCUSSION

Ninety eight cases of Acute pancreatitis admitted, were evaluated for the course of the disease and the development of surgical complications and management of the same.

Present study shows a very high incidence of Acute pancreatitis in males [83.7%] as seen in other Indian studies like Savio G et al [96.1%] and Baig.S.J et al [73.3%] as compared to European studies like by Kaya.E et al [50.25%] and Papaehristou C.I et al [51%].

Most of the patients who presented in this series presented with epigastric pain [97.9%] and vomiting [80.6%].

In the present study alcoholism predominates as the main cause of acute pancreatitis. Other Indian studies also gives similar results with Savio et al study [from Goa] showing a very high incidence of alcoholic pancreatitis.

European studies indicate biliary diseases as the predominant cause of acute pancreatitis.

The incidence of Acute necrotising pancreatitis was 11.2% showing a similar trend with European study by Pappaehristou et al [19%]. 72.5% cases of Acute biliary pancreatitis underwent cholecystectomy during the same admission in our study of which 61% was open cholecystectomy. 79.6% of patients developed surgical complications as defined by the Atlanta symposium during the course of study.

In the present series there were 13 cases of Peripancreatic fluid collection accounting for 13.3% of surgical complications. 30% of these patients underwent laparoscopic peritoneal lavage due to persistent fluid collections.

Rest of the 70% patients underwent conservative management. This study shows a similar trend with a previous study done by Botoi.G et al in 2009.

The above table shows that the incidence of pseudocyst in our study [10.2%]

was low compared to the previous Indian study by Poornachandra K.S [53%]

and Leung T.K et al [20%]. of these cases of pseudocyst only 8 were mature and symptomatic. 62.5% of these mature cases of pseudocyst underwent conservative management. Intervention was done only in 3 cases [37.5%].

One patient underwent Cystogastrostomy and another patient underwent Cystojejunostomy. The endoscopic procedure was a cystoduodenostomy.

In the present series we had 11 cases of pancreatic necrosis. As all these were sterile necrosis a conservative management was done.

In the present series there was only one case of Pancreatic abscess similar to the other Indian study by Baig et al.

The patient with abscess died due to MODS indicating a very poor prognosis of this condition.

A case of Splenic vein thrombosis was present in this series who underwent anticoagulant therapy. Incidence of Splenic vein thrombosis is much less in our study compared to the study by Martele et al.

SUMMARY

Acute pancreatitis is one of the most common and catastrophic acute abdominal conditions seen in our OPD and Emergency services.

In this prospective study the age incidence, etiology, symptomatology, diagnostic modalities, grading and treatment of acute pancreatitis in 98 of the patients who presented to us is dealt in detail. These patients were followed up regularly over a minimum period of 6 months to observe for the development of surgical complications. These complications were studied in detail to assess the symptomatology, diagnosis and management of the same.

In this study,

- Alcohol was the major etiological agent in 65.3% patients followed by biliary diseases 18.4%
- Epigastric pain, distension and tenderness were the most common clinical features
- Serum Lipase was the diagnostic test with a sensitivity of 97.9%
- Ranson's scoring system was used to categorize patients based on severity.
- Acute oedematous pancreatitis accounted for 84.7% of cases.
- 72% of biliary pancreatitis cases underwent cholecystectomy during the same admission 79.6% cases developed surgical complications during the follow up period of which persistent ileus was the most common [44%] Patients with paralytic ileus were managed conservatively.
- Peripancreatic collection was present in 13 patients.
- Serum lipase has a considerable association with development of peripancreatic collections as 85% of patients who developed the same had higher levels lipase on admission.
- 70% of these patients were managed conservatively and 30% underwent laparoscopic peritoneal lavage.
- Serum amylase is a strong indicator of development of pseudocysts as 89% of patients with levels more than twice the upper limit developed pseudocysts.
- Patients with mature pancreatic pseudocysts 63% underwent conservative management ; 37% cases underwent internal drainage procedures.
- All patients with pancreatic necrosis were managed conservatively.
- One case of pancreatic abscess that was present during our study died of MODS.
- One case of splenic vein thrombosis that we had was managed conservatively 14 % patients had recurrence; of which 85% were due to persistent alcoholism The only mortality that we had was a case of Pancreatic abscess.

CONCLUSION

- Acute pancreatitis is a common acute abdominal condition.

- Alcoholism is the most common etiological factor in male patients.
- Calculus biliary disease is the most common etiological factor in females.
- Most of the patients present as acute abdomen within 24-48 hours.
- Serum Lipase assessment is the gold standard diagnostic test at present even though serum amylase is a more common and cheaper test.
- Disease stratification is most commonly done using Ranson's scoring system.
- Most of the cases are mild.
- An improving Ranson's score 2 is indicative of positive response to conservative management and lesser susceptibility to develop complications.
- Radiological assessment shows Acute oedematous pancreatitis to be the predominant type.
- In biliary pancreatitis if ductal system is normal no sphincterotomy is required.
- Cholecystectomy is compulsory to avoid recurrence of biliary pancreatitis.
- Surgical complications are very common in acute pancreatitis; ileus being the most common.
- Peripancreatic fluid collection has been found to have a significant association with the Serum lipase levels especially the values above twice the upper limit.
- Persistent Peripancreatic fluid collections and ascitis can be managed with peritoneal lavage.

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