# An Experience of Management of Acute Pancreatitis at Mayo Hospital, Lahore

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**A popular belief in our country is that acute pancreatitis is uncommon but our recent observations suggest contrary to it.: The case records of all those patients received in the emergency duty of south surgical ward of Mayo Hospital Lahore from February 1998 to August 1998and were diagnosed either clinically , biochemically or at laparatomy to have acute pancreatitis were reviewed .A four fold rise in serum amylase levels was taken as diagnostic of acute pancreatitis. Laparatomy was only carried out to exclude other abdominal conditions that mimic acute pancreatitis .The case records of patients admitted with the diagnosis of acute pancreatitis in the period 1996-97 were also reviewed for comparison. Total of 11 cases were seen during the six month period .Majority were females with gallstone being the commonest aetiological agent. Three (03)cases died (27%)of which two( 02)were males. Majority died after drainage of pancreatic abscess because of unresolved sepsis. On the contrary only three cases were seen in 1996-97,all were females with gallstones being the major aetiological agent. Though the case series is small to establish but we conclude on the basis of these observations that gallstone pancreatitis is not uncommon in our country and serum amylase levels should be asked for in any non specific acute abdominal pain.**

**Key words: Acute pancreatitis, incidence**

Acute pancreatitis has been defined as pancreatic inflammation of an otherwise healthy gland that may be followed by clinical and biological restitution of the gland if the primary cause is eliminated[1] .Lord Moynihan in 1925 described acute pancreatitis as "the most terrible of all the calamities that occur in connection with the abdominal viscera"[2]. This statement still underscores the importance of acute pancreatitis as a major cause of morbidity and mortality today.

Acute pancreatitis has progressively increased over the last 40 years in Britain[3] but no such record is kept in our country Pakistan and a popular belief is that it is uncommon. .During the last six months increasing number of patients are seen in the emergency ward of Mayo hospital Lahore with the diagnosis of acute pancreatitis or one of its complications (pseudocyst, abscess).That number of patients were not seen before. This prompted us to review the record of all these patients and to publish it so as to share our experience with our peers as well as to invite comments on it.

**Materials and Methods:**

This is a retrospective review of the case records of all those patients who presented during the emergency duty of south surgical ward of Mayo Hospital Lahore in the period from February 1,1998 to August 31,1998 and were diagnosed as having acute pancreatitis or one of its complications.Those patients clinically presumed to have acute pancreatitis but not proven biochimically and died later were excluded from the study.

Corresponding case records of the last one year(1996-97)of all those cases diagnosed as acute pancreatitis were also reviewed for comparison.

*Diagnostic criteria for acute pancreatitis:*

Patients were diagnosed as having acute pancreatitis on the basis of history and physical examination which was supported by raised serum amylase levels.(1000iu/l). Abdominal ultrasound was used routinely whereas CT scan was used in selected cases only.Laparatomy was not carried out with an intent to diagose but to exclude other lethal conditions like strangulation of the gut and perforation of the duodenum.

*Treatment protocol:*

All patients were kept nil by mouth and routine nasogastric aspiration was started .All were given H2 blocker and octreotide intravenously to reduce gastric and pancreatic secretions. A third generation cephalosporin, parenteral nutrition and anlagesia were also added to the treatment regimen. Patients requiring ventilatory and other organ support were managed in the surgical intensive care facility.

Operative intervention to debride and drain the infected pancreatic material was done only when indicated by rising temperature and a CT evidence of pancreatic abscess.Oral feeding was started at least 72 hours after the cessation of pain and resolution of ileus .Patients were discharged home and later advised to come back for cholecystectomy where aetiological agent was gallstones.

**Results:**

Total of 11 cases were seen during the six month period from February 1998 to August 1998.Majority were females(M:F=1: 1.75) and about 50% of the patients were in the 4th and 5th decade of their lives(Table1).

Table 1:Age and sex incidence(n=11)

| Age | Male | Female |
|---|---|---|
| 12-25 | 0 | 0 |
| 26-50 | 03 | 04 |
| 51-75 | 01 | 03 |
| Total | 04 | 07 |

Upper abdominal pain and epigastric tenderness were the commonest symptom and sign found in 100% and 90%of the patients respectively.(Table2)Majority of patients were diagnosed clinically and biochemically (64%)but laparatomy aided in the diagnosis of four(04) cases (Table3). Two cases had normal serum amylase levels, whereas it was not available in two cases. Gallstones were present in 80% of the cases (Table 4) all were females.

Table 2:Clinical presentation(n=11)

| Symptoms and signs | No. of Pts. | %age |
|---|---|---|
| Upper abdominal pain | 11 | 100 |
| Vomiting | 07 | 72 |
| Absolute constipation | 03 | 27 |
| Epigastric tenderness | 10 | 90 |
| Epigastric mass | 03 | 27 |
| Dyspneoa | 02 | 18 |
| Shock | 02 | 18 |

Table 3:Mode of diagnosis(n=11)

| Symptoms and signs | No. of Pts. | %age |
|---|---|---|
| Diagnostic laparotomy | 04 | 36% |
| Clinical and biochemical | 07 | 64% |

Table 4:Aetiology of acute pancreatitis(n=11)

| Cause | No. of Pts. | %age |
|---|---|---|
| Gallstone | 08 | 72 |
| Idiopathic | 02 | 18 |
| Trauma | 01 | 10 |

Three(03) cases developed pancreatic abscess and only one survived whereas one case had a pseudocyst of the pancreas which was managed conservatively. The overall mortality was 27%(03/11)of which two were males. Unresolved sepsis was responsible for two cases whereas one died of adult respiratory distress syndrome .All deaths were encoutered post operatively. On the contrary only 03 cases of acute pancreatitis were females with gallstones. Preoperative diagnosis of acute pancreatitis was only possible in one case but there was no mortality during that period.

Table 5:Morbidity and Mortality(n=11)

| Complication | No. of Pts. | %age |
|---|---|---|
| Mortality | 03 | 27 |
| Pancreatic abscess | 03 | 27 |
| Adult respiratory distress syndrome | 02 | 18 |
| Sepsis | 02 | 18 |
| Multi-system organ failure | 02 | 18 |

Table 6:Review of cases of 1996-97

| Age | Sex | Mode of diagnosis | Aetiology | Outcome |
|---|---|---|---|---|
| 29Y | Female | Eploratory laparotomy | Gallstone | Settled |
| 33Y | Female | Laparotomy | Gallstone | Pancreatic phlegmon |
| 47Y | Female | Biochemical | Gallstone | Settled |

**Discussion:**

Acute pancreatitis includes a broad spectrum of pancreatic disease which varies from mild parenchymal edema to severe hemorrhagic pancreatitis associated with loss of parenchymal viability, with subsequent gangrene and necrosis. The clinical presentation of acute pancreatitis is also quite variable and this can lead to confusion and uncertainty in diagnosing acute pancreatitis which is essentially a diagnosis of exclusion[4].

The commonest symptom in acute pancreatitis is upper abdominal pain with radiation to the back, which is present in about 85 to 100 percent of the patients But autopsy reports have revealed that about 20% of the patients had no pain[5].in our cases it was present in 100% of the cases. Vomiting is the next common symptom which is present in about 90% of the cases though it was present in only 72% of our cases

The findings on physical examination are variable but we found that epigastric tenderness was found in 90% of our cases. Rest of the symptomatology are sequelae of the pancreatitis and do not help in the initial diagnosis of acute panrcreatitis[6]

Despite recent improvements in diagnostic techniques ,the only means by which the occurrence of acute pancreatitis can be established are laparatomy or autopsy. All other criteria lack both sensitivity and specificity[7].

In Britain, there has been a genuine rise in the incidence of acute pancreatitis[8].On the other hand ,in USA epidemiological data based on autopsy reports indicate an overall prevalence of 0.5%.and an upward trend has been noted in the crude death rate from 01 per 100000 in 1955 to 1.5 per 100000 in 1965[9].

When we look at the record of all the cases admitted in south surgical ward during the year 1997-98,there were hardly three patients which is in sharp contrast to period from February 1998 to August 1998 during which 11 cases of acute pancreatitis were seen. This may mean an increase of about 4 fold .The question is whether this increase is genuine or is associated with improvement in diagnosis. We think it can be both. .Firstly, serum amylase kit was not available in the emergency laboratory of our hospital and doctors use to hesitate in sending the blood sample outside the hospital .This kit was made available few months back .Hence serum amylase was being done more frequently but it is important to emphasize that a normal level of serum amylase does not

exclude the diagnosis of acute pancreatitis as 2 of our patients also had normal levels of serum amylase.

There is now a consensus among the surgeons that a fourfold rise in the levels of serum amylase is taken as diagnostic of acute pancreatitis as this much rise is not encountered in other conditions leading to hyperamylasemia like perforated duodenal ulcer, strangulation of the gut and gangrenous gallbladder[10]. Among the various aetiological factors of acute pancreatitis, gallstone were responsible for almost 80% of our cases and majority of our patients were females. The same is the case in Britain but in USA, alcholism is the predominant aetiology[11].

Laparotomy aided in the diagnosis of four cases(36%) although the international figure is around 5-15%[12]. We adopted a liberal policy in exploration because of two reasons. Firstly we could not exclude other surgical causes of acute abdomen in these cases and secondly, because of non availability of serum amylase in the emergency laboratory of Mayo Hospital.

We did diagnostic laparatomy in 04 cases (36%). We adopted a liberal policy in exploration because of two reasons. Firstly, acute pancreatitis is a diagnosis of exclusion and secondly, serum amylase levels could not be determined in two cases.

Three(03) of our patients died after operative intervention, two males and one female. Out of two males, one died of adult respiratory distress syndrome after laparatomy as the condition of the patient deteriorated The other male patient settled initially but later developed pancreatic abscess which was confirmed by a CT scan .Patient underwent planned exploration. Pancreatic sequesterectomy and drainage was done ,but patient deteriorated despite aggressive medical management and died after three weeks because of unresolved sepsis leading to multiorgan failure. Higher mortality in male patients may mean worse prognosis of the disease in this sex.

One female patient died after pancreatic debridement for pancreatic abscess ,She also died of unresolved sepsis. Another female patient in her 30's developed pancreatic abscess confirmed by a CT scan but she settled with conservative management after three weeks of intensive therapy. This may be related to her younger age.So our overall mortality rate was 27%. The mortality was higher .in the patients who developed a pancreatic abscess as two of them died (66%) and only one survived .This is not surprising as the mortality figures quoted in the literature are in the range 29 to 67%[13]. but the overall mortality remains 10-15%[14].

## Conclusion

Although the case series is small and a multicentre incidence data in Pakistan is required but based on these observation .we conclude that acute gallstone pancreatitis especially in women is not uncommon in our country contrary to the popular belief that it is uncommon.. It is recommended that record keeping should be improved so as to get an all Pakistan data .Lastly ,in any non specific acute abdominal pain, serum amylase levels should be routinely asked for.

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