

# Aetiology and Complications of Acute Pancreatitis – five years experience

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This study of 75 patients admitted in our surgical unit during five years was conducted to find out the aetiology and complications of acute pancreatitis. The most common cause of acute pancreatitis was gall stone disease and the least common being congenital anomalies of the pancreas (Pancreatic divisum). Other causes include trauma, idiopathic, alcoholism, pancreatic carcinoma, septicaemia and diabetes mellitus. Out of 75 patients, 45 patients had complications including pseudocyst, hypocalcaemia, pancreatic abscess, shock, ARDS and 17 patients with pancreatitis died of some complications..

**Key words:** Acute pancreatitis, aetiology, complications

Pancreatitis is the non-bacterial inflammation of pancreas. Most commonly, it is caused by gall stone disease, alcoholism, trauma or may be idiopathic. Its incidence and aetiology and complications varies in different populations<sup>1,2</sup>.

Acute pancreatitis has protean clinical manifestations and can mimic any upper abdominal emergency e.g., perforated duodenal ulcer, acute cholecystitis, mesenteric ischaemia etc<sup>3</sup> It is due to the severity of the disease, complications develop and underlying cause. Pain in the upper abdomen with its wide spectrum is the main symptoms in about 85-90% of the cases<sup>2,3</sup>. Other features include nausea, retching, vomiting, dyspnoea, tachycardia, fever jaundice and tenderness in the epigastrium. Occasionally there may be abdominal distension, which is due to paralytic ileus.

Diagnosis is made on the basis of clinical assessment and investigations including serum amylase, serum lipase, C-reactive protein, abdominal ultrasound, plain abdominal radiograph. Acute pancreatitis is treated either conservatively or by endoscopic sphincterotomy or urgent surgical intervention may be needed<sup>10</sup>. Once the acute attack has settled the cause should be removed to prevent the recurrence. Surgery is indicated when diagnosis is in doubt or when the condition of patient does not improve on conservative treatment, when gall stones are the cause, or to treat the local complications of pancreatitis, like pancreatic abscess, pseudocyst.

## Patients and methods

This study was carried out in 75 patients with acute pancreatitis to find out the aetiology and complications. They were admitted in our surgical units, during five years from July 1995 to June 2000. Paediatric group was excluded from the study, with the age range from 13-85 years (Mean 39). Peak incidence is at the age of 45-55 years (26 patients) (Table 1)

All patients were assessed clinically and then investigated and managed. Only 8(10.64%) patients were

already diagnosed and these were shifted from the medical units of this hospital for the diagnosis and treatment of vague abdominal pain. Among the remaining 67(89.11%) patients 57 were admitted through Emergency and 10 from OPD. Most patients had pain and tenderness either in the epigastrium or in the upper abdomen or both in the right hypocondrium and epigastrium. Other features were nausea and vomiting, jaundice, tachycardia, shock, etc. Nine patients had symptoms only related to gall stone disease and no symptoms of pancreatitis. Serum amylase was markedly raised which suggested diagnosis of pancreatitis and with conservative treatment these settled. Later the cause was removed by cholecystectomy. History of alcohol intake in all the 7 patients and they had no gallstone disease, 2 of them were shifted from medical unit. History of trauma in 10 patients (included 2 ERCP, 2 penetrating and 6 blunt abdominal trauma). Investigations done in these patients include blood examination for Hb, TLC, DLC, blood urea, sugar, serum creatinine, serum amylase, C reactive protein, abdominal ultrasound, plain X-ray abdomen, urine examination and ERCP (in 38 patients to diagnose as well as to treat the patients). C.T. Scan (19 patients)<sup>9</sup>. The patients were managed in the ward either conservatively or by endoscopic papillotomy or urgent surgery was performed. The urgent surgery was done in those patients in which the diagnosis was not certain or the patient condition deteriorated despite conservative management. Later on the surgery was carried out to treat the complications.

Table 1

Age (Years)	Male	Female	Total No.
13-25	-	1	1
25-35	1	3	4
36-45	6	4	10
46-55	6	4	26
56-65	8	15	22
66-75	4	3	7
75-onwards	2	2	4

## Results

Out of 75 patients, 44(58.53%) were female and 31 were male (41.47%) with the ratio of 1.45:1. As is shown in Table 2, 52 were admitted through Casualty and Emergency Department, 4 from OPD, 8 were shifted from medical units and 11 referred from periphery.

The etiology of the disease varied with the most common cause being gall stones (61.18%). The other common causes include trauma (13.3%), alcoholism (9.3%) while 7.9% cases were labelled as idiopathic. Rare causes included pancreatic carcinoma (2.66%) congenital anomalies (1.33%), diabetes mellitus (1.33%), septicaemia (2.66%)(table 2).

Table 2 Aetiological Factors of acute pancreatitis.

Cause	Male	Female	No.	%age
Gallstones	15	3	46	61.18
Trauma	7	3	10	13.30
Congenital anomaly	0	1	1	1.33
Alcoholism	5	2	7	9.31
Pancreatic cancer	1	1	2	2.66
Diabetes mellitus	0	1	1	1.33
Idiopathic	2	4	6	7.98
Septicaemia	1	1	2	2.66

Complications occurring early after admission included shock (31.92%), ARDS (15.96%) and hypocalcaemia (9.31%)(table 2). Late complications were pancreatic pseudocyst(37.24%), abscess (10.64%) and deaths (22.61%). All these complications were treated on their own merit.

Table 3. Complications of pancreatitis

Complications	No.	Male	Female	%age
Shock	24	9	15	31.92
ARDS*	12	6	6	15.96
Hypocalcaemia	7	3	4	9.31
Pseudocyst	28	10	18	37.24
Pancreatic Abscess	8	3	5	10.64
Deaths	17	8	9	22.61

\*Adult respiratory distress syndrome(ARDS)

## Discussion

The divergence in aetiology of acute pancreatitis may be different in different population and different studies. It is due to the incidence of gall stones disease, alcohol consumption and trauma. As the gall stones are more common in females, so the incidence of the pancreatitis more in this group patients, Carcinoma of head of pancreas, Septicaemia, Diabetes Mellitus and others

factors are rare causes of pancreatitis<sup>5, 12</sup>. In Western countries the alcohol consumption is more common, so it is an important cause of pancreatitis among them<sup>2,3,6</sup>. But in our part of world it is less common, even less than the trauma. Different reports suggest that pancreatitis is increasing, because of the increased awareness on part of the patient and better diagnostic facilities<sup>3</sup>. Moreover, incidence of the disease has increased because of the increase in gall stone disease and trauma<sup>2,10,11</sup>. Recently laxipafant is being used in the treatment of pancreatitis.

The patients either had already developed some complications due to pancreatitis or had it during admission and management<sup>4,7,8</sup>. These complications include pancreatitis abscess, pseudocyst, ARDS, shock and hypocalcaemia. These complications are treated on their own merit.

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