

Original research article**A study on clinical profile of patients with acute pancreatitis****¹Dr. Shrishail Hanagandi, ²Dr. Seema Dhang, ³Dr. S Bhuyan**¹Assistant Professor (Surgical Gastroenterologist), Department of General Surgery, BIMS, Belgavi, Karnataka, India²Medical Officer, Department of Health and Family welfare, Belgavi, Karnataka, India³Professor, Department of General Surgery, Assam Medical College, Dibrugarh, Assam, India**Corresponding Author:**

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Abstract

Most patients experience relatively minor episodes of disease characterized by mild parenchymal edema without distant organ dysfunction and an uneventful recovery. Severe episodes, however, may involve a progression to extensive pancreatic necrosis, development of the systemic inflammatory response syndrome (SIRS), multiorgan failure, rapid clinical deterioration, and even death. Routine investigations like complete hemogram, Blood sugar serum creatinine Blood urea, Serum calcium and Serum amylase, Serum lipase and liver function tests were performed. USG Abdomen was done routinely to confirm the diagnosis, exclude other conditions, for evaluation of the biliary tract and for detecting any complications. In present series 100% of the patients had tenderness, 19.61% had pseudocyst presenting as mass abdomen, 13.72% had ascites, 19.61% had pleural effusion and 7.84% of the patients presented in shock. In present study S. amylase and S. lipase was done routinely. 64.71% of the patients had S. amylase levels more than three times normal i.e. >240 IU/L.S. lipase was more than 3 times (>130U/L) in 80.39% patients, both S. amylase and S. lipase together picked up 86.27% of patients. 17.65% had raise blood sugar level, 9.8% had elevated blood urea nitrogen (BUN), 17.64% had hypocalcaemia 11.76% had a WBC count of more than 15,000 cells/mm³ and 5.88% of the patients had elevated AST levels.

Keywords: Acute pancreatitis, S. amylase, S. lipase**Introduction**

Acute pancreatitis is acute condition presenting with the abdominal pain and is usually associated with raised enzyme levels in blood. Estimated incidence is about 3% of cases presenting with pain abdomen in the UK. The hospital admission rate for acute pancreatitis is 9.8/100000 per year in UK and annual incidence may range from 5-50/100000 worldwide ^[1].

Recent Studies from eastern India ^[2] and Finland ^[3] have found alcoholism as the main aetiological factor, Alcoholism was cause in 41.1% and 70% of patients in above studies respectively.

Most patients experience relatively minor episodes of disease characterized by mild parenchymal edema without distant organ dysfunction and an uneventful recovery. Severe episodes, however, may involve a progression to extensive pancreatic necrosis, development of the systemic inflammatory response syndrome (SIRS), multiorgan failure, rapid clinical deterioration, and even death. Although the overall mortality rate for acute pancreatitis is 2-10%, this is related primarily to the 10-30% of patients with severe disease characterized by pancreatic and peripancreatic necrosis ^[4].

Given the wide spectrum of disease seen, the care of patients with pancreatitis must be highly individualized. Patients with mild acute pancreatitis generally can be managed with resuscitation and supportive care. Etiologic factors are sought and treated, if possible, but operative therapy essentially has no role in the care of these patients. Those with severe and necrotizing pancreatitis require intensive therapy, which may include wide operative debridement of the infected pancreas or surgical management of local complications of the disease. Whereas early aggressive debridement was used commonly for all patients with pancreatic necrosis in the past, now most pancreatic surgeons have adopted a more conservative algorithm of selective and delayed pancreatic debridement ^[5, 6].

Methodology**Inclusion Criteria:** All patients with acute pancreatitis aged above 12 years admitted to general surgery department.**Exclusion Criteria**

1. Patients less than 12 years of age.

2. Patients of chronic pancreatitis or acute on chronic pancreatitis.

Method of Collection of Data

The diagnosis was considered in patients after a detailed clinical history and examination of the patient was done with two of following three features.

1. Upper abdominal pain of acute onset often radiating to the back consistent with pancreatitis.
2. Serum amylase and/or lipase activity more than 3 times normal.
3. Ultrasound or C.T. scans suggestive of acute pancreatitis.

After establishing diagnosis, Following sequential steps have been followed.

1. Assess the severity of the disease
2. Identify the presence of biliary tract disease, excluding other possible etiologies of the acute pancreatitis.
3. Detect any complications.

Routine investigations like complete hemogram, Blood sugar serum creatinine Blood urea, Serum calcium and Serum amylase, Serum lipase and liver function tests were performed. USG Abdomen was done routinely to confirm the diagnosis, exclude other conditions, for evaluation of the biliary tract and for detecting any complications. Contrast enhanced CT Abdomen was undertaken when the diagnosis was doubtful, when USG was not confirmative and when patient failed to improve beyond 72 hours.

The patients were classified as having.

1. Mild acute pancreatitis if, it is associated with transient organ failure (<48 hours), no local complications and an uneventful recovery.
2. Severe acute pancreatitis if, it is associated with organ failure (>48 hours) and/or local complications, such as necrosis, abscess, or Pseudocyst.

Results

In our study age ranges from 19-65years mean age was 39.43years.

The incidence of disease according to age given below

Table 1: Age distribution of patients

Age group (in years)	Number (n)	Percentage (%)
12 - 20	1	1.96
21 - 30	12	23.53
31 - 40	18	35.29
41 - 50	10	19.61
51 - 60	8	15.69
60 - 70	2	3.92
>70	0	0.00
Total	51	100.00

In our present series, we had a male predominance who accounted for 66.67% of the patients and the females accounted for 33.3% of the total patients.

Table 2: Sex distribution of patients

Sex	Number (n)	Percentage (%)	Ratio (male: female)
Male	34	66.67	2: 1
Female	17	33.33	
Total	51	100.00	

Out of 51 patients, 47 (92.6%) were Hindus and 4 (7.84%) were Muslims.

Table 3: Religion wise distribution

Religion	Number (n)	Percentage (%)
Hindu	47	92.6
Muslim	4	7.84
Christians	0	0.00
TOTAL	51	100.00

Most cases belong to middle or low socio economic classes. 29 (70.73%) were males and 12 (29.27%) of females were belongs to lower class. 5 (50%) were males and 5 (50%) females were belongs to middle class.

Table 4: Socioeconomic distribution of patients

Socio-economic class	Male		Female		Total	
	n	%	N	%	n	%
Upper Class	0	0.00	0	0.00	0	0.00
Middle Class	5	50.00	5	50.00	10	19.61
Lower Class	29	70.73	12	29.27	41	80.39
Total	34	66.67	17	33.33	51	100.00

In present series 100% of the patients presented with pain abdomen, 80.39% with nausea/vomiting, 29.41% with abdominal distension, 21.5% with fever and 9.88% with jaundice.

Table 5: Symptomatology

Symptoms	Number (n)	Percentage (%)
Pain Abdomen	51	100.00
Nausea and Vomiting	41	80.39
Fever	11	21.57
Abdominal Distention	15	29.41
Jaundice	5	9.80

In present series 100% of the patients had tenderness, 19.61% had pseudocyst presenting as mass abdomen, 13.72% had ascites, 19.61% had pleural effusion and 7.84% of the patients presented in shock.

Table 6: Signs

Clinical findings	Number (n)	Percentage (%)
Tenderness	51	100.00
Ascites	7	13.72
Lump Abdomen	6	11.76
Shock	4	7.84
Pleural Effusion	10	19.61

In present study S. amylase and S. lipase was done routinely. 64.71% of the patients had S. amylase levels more than three times normal i.e. >240 IU/L. S. lipase was more than 3 times (>130U/L) in 80.39% patients, both S. amylase and S. lipase together picked up 86.27% of patients. 17.65% had raise blood sugar level, 9.8% had elevated blood urea nitrogen (BUN), 17.64% had hypocalcaemia 11.76% had a WBC count of more than 15,000 cells/mm³ and 5.88% of the patients had elevated AST levels.

Table 7: Investigations

Investigations	Number (n)	Percentage (%)
Serum Amylase	33	64.71
Serum Lipase	41	80.39
BUN	5	9.8
Serum Creatinine	5	9.8
RBS >140mg/dL	9	17.65
WBC > 15000/ mm ³	6	11.76
AST > 200IU	3	5.88
S. Calcium < 8 mg/dL	9	17.64

USG Abdomen was diagnostic in 72.54% of the patients in our study.

Table 8: USG examination

USG	Number (n)	Percentage (%)
Diagnostic	37	72.54
Non diagnostic	14	27.46
Total	51	100.00

In our study it was done in 22 (43.31%) patients, was diagnostic in all patients.

Table 9: CT scan examination

Ct scan	Number (n)	Percentage (%)
Diagnostic	22	100.00
Non Diagnostic	0	0.00
TOTAL	22	100.00

Discussion

Acute pancreatitis is a common disease entity in patients presenting with abdominal pain. Frequent occurrence and serious complications have brought into fore the issues regarding management.

While diagnosing a case of acute pancreatitis, a through history, a complete physical examination and biochemical tests are necessary. Radiological confirmation may be required. In this study, analysis of clinical presentation of acute pancreatitis was done. Relevant investigations were carried out and patients appropriately managed depending upon the etiology and severity of acute pancreatitis.

The mean age of presentation in our study was 39.43 years and is comparable to the study by Kashid A *et al* and Baig SJ *et al* Other studies had late presentation in the 5th and 6th decade. This is probably because alcohol was the main etiological factor in our study which presents usually in the younger age group.

Table 10: Mean age distribution

Series	Year	Mean age (in years)
Baig SJ <i>et al</i> [3]	2008	30
Gloor B <i>et al</i> [5]	2000	55.1
Pupelis G <i>et al</i> [7]	2008	47
Chang MC <i>et al</i> [8]	2003	52.5
Kashid A <i>et al</i> [9]	2006	35
Present Study	2012-13	39.2

There was a male predominance in our study with males accounting for 66.67% of patients with an M: F: 2:1. The other studies also had a higher percentage of males; ratio was comparable to other studies.

Table 11: Sex distribution

Series	Year	Male (%)	Female (%)
Baig SJ <i>et al</i> [2]	2008	73.33	26.67
Choudhuri G <i>et al</i> [10]	2006	66.6	33.4
Chang MC <i>et al</i> [8]	2003	71.4	28.6
Present Study	2012-13	66.67	33.33

In present study it was found that history of alcohol was present in 34 (66.67%) patients. This was comparable to the study by Sand J at Finland. In the other studies gall stone was the main etiological factor. The percentage of idiopathic cases was comparable.

Clinical features of present study were comparable to study by. Kashid A *et al*.

Table 12: Clinical features

Series	Year	Clinical Features (%)				
		Pain Abdomen	Nausea and Vomiting	Abdominal Distension	Fever	Jaundice
Kashid A <i>et al</i> [9]	2006	92.73	60.00	-	20.00	7.27
Present Study	2012-13	100.00	80.39	29.41	21.57	9.80

The sensitivity of serum amylase was 64.71% in the present study and was more than the study by Kashid A *et al*. But it is less than the study by Thomson (95.6%) and Gomez D *et al* (78.6%) and this can be attributed to the late presentation of patients to our institution, and also because alcohol is the main etiological agent, where the rise of S. Amylase is less compared to biliary pancreatitis. S. Lipase had sensitivity of (80.39%) was comparable to study by Keim V *et al*.

Table 13: Serum amylase and lipase sensitivity

Series	Year	Serum amylase sensitivity (%)	Serum lipase sensitivity (%)
Thomson <i>et al</i> [79]	2006	95.60	-
Kahid A <i>et al</i> [9]	2006	50.90	-
Gomez D <i>et al</i> [12]	2012	78.6	96.6
Present Study	2012-13	64.71	80.39

Conclusion

- In our present series, we had a male predominance who accounted for 34 (66.67%) of the patients and the females accounted for 17 (33.3%) of the total patients (M: F - 2: 1). Patients in the 4th decade

were commonly affected. 34 (66.67%) of patients were found alcoholic. They presented with sudden onset of pain following a bout of alcohol ingestion. Most of patients were belong to lower and middle class.

- The most common presentation was pain abdomen (100%) mainly situated in the epigastric region often radiating to back and associated with nausea and vomiting (80.39%). The average duration of pain was 2 to 6 days.

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