

**Original Research Article**

## **Evaluation Of Clinical Profile Of Acute Pancreatitis In A Tertiary Centre: A Cross Sectional Study**

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### **Abstract**

**Background:** Acute pancreatitis is one of the most common diseases affecting the exocrine pancreas. Acute pancreatitis is a disease for which patients are in large numbers, etiology, clinical presentation and examinations are varied. Disease may be mild or severe, may lead to multi organ failures and death. The incidence of acute pancreatitis has increased during the past 20 years.

**Aim and objective:** To study the clinical profile of patients with acute pancreatitis at a tertiary health care centre

**Methodology:** Present study was a prospective study carried out on patients with acute pancreatitis admitted in department of surgery. Data collected was sociodemographic data, clinical history and clinical examination. All patients underwent biochemical investigations, Radiological investigations. All the patients were treated with conservative treatment.

**Results:** Most commonly affected age group was 21-40 year males. Most common etiological factor was alcohol 75.55%, 15.55% patients had history of biliary tract disease. Epigastric pain was most common. Majority of the patients (68.88%) had Ransons score of 0-2.

**Conclusion:** Acute pancreatitis is one of the leading cause of increased morbidity and mortality to society. Acute pancreatitis is a disease with male predominance. Conservative management is the mainstay of treatment in acute pancreatitis.

**Keywords:** Acute pancreatitis, epigastric pain, Ransons Score,

### **INTRODUCTION:**

Acute pancreatitis is an acute inflammatory process of the pancreas, with variable involvement of other regional tissues or remote organ systems<sup>1</sup>. The name “pancreas” is derived from Greek word “pan” (all) and “Kreas” (flesh). It was originally thought to act as cushion for stomach<sup>2</sup>. Pancreas being an integral organ in the digestive apparatus, inflammation of the pancreas results in profound metabolic derangements. The etiology and clinical manifestations of pancreatitis have great

variations. Acute pancreatitis is an acute inflammation of pancreas. It is usually reversible and there are increased levels of pancreatic enzymes in blood and urine<sup>3</sup>.

Moynihan (1925)<sup>4</sup>. Acute pancreatitis is most commonly secondary to biliary tract disease and alcohol abuse, but other causes may include viral infections, trauma, drugs, metabolic and connective tissue disorders and genetic mutations. The release of hydrolytic enzymes, cytokines and toxins promote a hypermetabolic state as manifested by increased resting energy expenditure (REE).<sup>5,6</sup> Most recent studies suggest that acute pancreatitis is a disease having three phases. In first phase, there is intra pancreatic digestive enzyme activation and there is injury of acinar cells. Activation of trypsin is due to lysosomal hydrolases such as cathepsin B. In the second phase there is activation, chemo attraction and sequestration of leucocytes. In the third phase there are effects of proteolytic enzymes and cytokines released by pancreas, on distant organs.<sup>7</sup> Acute pancreatitis patient present with epigastric pain, vomiting, high fever, tachypnoea, mild jaundice, haematemesis/melaena, distension of abdomen and oliguria. The scoring systems are Atlanta classification,<sup>8</sup> Ranson's Criteria,<sup>9</sup> APACHE II scoring system (Acute Physiology and Chronic Health Evaluation)<sup>10</sup> are the Various scoring systems used for classification and management of Acute pancreatitis.

Management of acute pancreatitis is mainly conservative with relief of pain, nasogastric aspiration, nutritional support and intravenous fluids to maintain hydration. Enteral nutrition is an important treatment modality. Advantages of enteral nutrition over total parenteral nutrition are cost effective, less catheter-related complications, better maintenance of intestinal mucosal integrity and less alteration of intestinal mucosal barrier function and intestinal permeability. Present study was conducted with objective of to study the clinical profile of patients with acute pancreatitis at a tertiary health care centre.

## **MATERIALS AND METHODS**

Present study was a prospective observational study carried out at department of surgery at a tertiary health care centre. Study population was patients with acute pancreatitis admitted in department of surgery.

All the patients diagnosed as acute pancreatitis and Patients who were ready to follow up were included in the study. Patients with chronic pancreatitis and Patients not willing to participate in the study were excluded. sociodemographic data like age, sex. Detailed clinical history was noted. A through clinical examination was done.

Investigation: All patients underwent biochemical investigations including a total and differential WBC counts, serum amylase blood sugars, serum creatinine, serum electrolytes, serum calcium, liver function tests and ascitic fluid or pleural fluid amylase as and when required. Radiological investigations like plain X-ray abdomen AP view, X-ray chest PA view and USG were done in all patients. CT scan was done when required.

Treatment: All the patients were treated with conservative treatment included fluids administration, nasogastric tube aspiration, i.v. analgesics, antibiotics along with injectible proton pump inhibitors and medicines to decrease pancreatic secretions. Monitored the vital parameters, abdominal girth charting, intake/output monitoring and clinically assessed for the response of conservative management. Recovered were discharged and followed up on outpatient basis. Surgical/Radiological intervention was done according to severity of disease and response to conservative management. Ranson's criteria is one of the first scoring systems used to assess prognosis in acute pancreatitis. It consists of 11 parameters, 5 assessed at admission and 6 more during the next 48 hours

All the demographic and clinical data of the participants were recorded. All data were processed, analyzed and disseminated by using MS Excel.

## RESULTS

45 acute pancreatic patients were included based on inclusion criteria. Out of these 45 patients, majority of the patients were from the age group of 21-40 years (76.66%) followed by 41-60 years (15.54%). Patients below 20 years (4.5%) and above 60 years (2.22%). (table 1) In our study male (80.66%) predominated females (19.34%). The most common etiological factor was alcohol 34 (75.55%) and 7 (15.55%) patients had history of biliary tract disease. Trauma was found in 3(6.68%) patients. one patient had iatrogenic history(2.22%). (table 2). In our study abdominal pain was in 100% patients, vomiting in 85% of patients, and fever in 03%. According to Ransons score(table3), clinical features and investigations patients were classified. Majority of the patients (68.88%) had Ransons score of 0-2. In 15.55% Ransons score 3-4 and 5-6 were seen in 11.11% patients. out of 45 patients score Ransons of 7-8 was observed in (4.44%) patients. In our study, pleural effusion was seen in 10(22.22%) population. Acute necrotising pancreatitis, Pancreatic pseudocyst, pancreatic abscess were seen in one patient each. Acute renal failure was seen in one patient and acute respiratory distress syndrome was observed in 1 patient. (table 4) In our study, 35 patients were managed by conservative management and 10 needed surgical intervention. In 2 patients Open necrosectomy with closed drain placement was done. Exploratory laparotomy with drainage of abscess with lavage and closed drain placement was done in 1 patient. One patient with pleural effusion was treated with ICD insertion. In our study, 42 (93.33%) out of 45 patients responded well to the treatment and discharged while 3 (6.67%) patients died.

**Table 1:** Distribution of Patients according to the age group.

Sr No	Age(yrs)	No of patients
1	Less than 20	02 (04.44%)
2	21-40	35 (77.77%)
3	41-60	07 (15.55%)
4	More than 60	01 (02.22%)

**Table 2:** Distribution of Patients according to etiological factors

Sr No	etiological factors	No of patients
1	Alcohol	34 (75.55%)
2	Biliary tract disease	07 (15.55%)
3	Traumatic	03 (06.68%)
4	Iatrogenic	01 (02.22%)

**Table 3:** Distribution of Patients according to Ransons score

Sr No	Ransons score	No of patients
1	0-2	31 (68.88%)
2	2-4	07 (15.55%)
3	5-6	05 (11.11%)
4	7-8	02 (04.44%)

**Table 3:** Complications in patients with acute pancreatitis.

Sr No	Complications	No of patients
1	Pleural effusion	20 (44.44%)
2	Acute necrotising pancreatitis	01 (02.22%)
3	Pseudocyst	01 (02.22%)
4	Pancreatic abscess	01 (02.22%)
5	Acute renal failure	01 (02.22%)

## DISCUSSION

Out of these 45 patients, majority of the patients were from the age group of 21-40 years (77.77%) followed by 41-60 years (15.55%) which is in similar with study of Baig SJ *et al*<sup>11</sup>. Another study by Wig JD *et al*.<sup>12</sup> showed that out of 161 patients, 127 were men (77%) and 37(33%) were women. In our study we found most common etiological factor was alcohol 34(75.55%) and other etiological factors were in similar with a study by Baig SJ *et al*.<sup>11</sup> found alcoholism in 41%, Another study by F. Anderson *et al*.<sup>13</sup>, found alcohol as the aetiology in two thirds (66%) of the . In our study, all patients complained of pain. Epigastric pain was most common. In our study, serum amylase was within the normal range in only 15% of the patients whereas it was raised in 85% of the patients. Serum lipase was raised in 28 (93.33%) of the patients. Agrawal *et al*.<sup>14</sup> observed a high sensitivity of serum amylase in the diagnosis of pancreatitis of 95-100%. Depending on the clinical features and investigations patients were classified according to Ranson's score. Majority of the patients (68.88%) found in similar to Marco Simoesa *et al*<sup>15</sup>. found a sensitivity of 91.2 % and specificity of 74.4% related to degree of sensitivity and Ranson's score 3 or above.

## CONCLUSION

Acute pancreatitis is one of the leading cause of increased morbidity and mortality to society. Acute pancreatitis is a disease with male predominance. In our study population pain abdomen, nausea and vomiting were the most common symptoms Alcohol is the most common etiological factor. Conservative management is the mainstay of treatment in acute pancreatitis.

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