

Research Article

Clinical profile of patients with acute pancreatitis

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ABSTRACT

Background: The observation on acute pancreatitis showed that the ultimate severity is determined by events that occur during the early stages of pancreatitis has prompted several groups of investigators to undertake studies designed to determine which clinical, chemical, or radiologic parameters might be used to identify those patients destined to experience a severe illness. Therefore the present study is designed to evaluate the clinical profile of patients suffering from acute pancreatitic patients.

Methods: The study population consisted of 40 cases of acute pancreatitis that fulfilled the diagnostic criteria. Data collection on admission included age, sex, address and clinical presentation with respect to pain vomiting, gallstones trauma and drugs was noted. History of previous episodes and co-morbidities was noted. Chi-square tests were employed to find out the difference between groups of frequencies obtained for the specific statements. A P value of less than 0.05 was considered statistically significant.

Results: Out of 40 patients, Males were (55%) and (45%) were females. Majority of patients were belonging to the age group of 41-60 (42.5%) with a median age of 37 yrs. Most common etiology for acute pancreatitis was biliary (55%) followed by alcoholism (32.5%), hyperlipidaemia (2.5%) and traumatic (2.5%) pancreatitis was found in one patient each and where no cause was found was labelled as idiopathic (7.5%). Biliary pancreatitis was the cause of acute pancreatitis in Females 88.3%. In males, alcoholism induced pancreatitis (50%) was most common, second commonest was biliary etiology.

Conclusions: The most common etiology for acute pancreatitis was biliary followed by alcoholism and traumatic pancreatitis. In Males, alcoholism induced pancreatitis was most common, second commonest was biliary etiology.

Keywords: Acute pancreatitis, Alcoholism induced pancreatitis, Traumatic pancreatitis, Biliary etiology

INTRODUCTION

Acute pancreatitis or acute pancreatic necrosis is a sudden inflammation of the pancreas that is associated with little or no fibrosis of the gland. It is usually characterized by the acute onset of symptoms in a previously healthy individual and the disappearance of those symptoms as the attack resolves. While mild cases are often successfully treated with conservative measures, such as fasting and aggressive intravenous fluid rehydration, severe cases may require admission to the intensive care unit or even surgery to deal with complications of the disease process.

Acute pancreatitis is a significant health problem which leads to a quarter of million hospital admissions in USA per year.¹⁻³ Pancreatitis is a contributing factor in an additional 4000 deaths annually and inflicts a heavy economic burden, accounting for more than \$2 billion in health costs annually in the United States.⁴ Unpredictable natural history and diagnostic delay often leads to belated and ineffective interventions in these cases.

Being able to predict the prognosis of a patient with acute pancreatitis at admission, forms a very important strategy considering that this will enable them to practice guidelines for standardization of management of the

patient, viz., the use of antibiotics, timings of computed tomography scans, use of ERCP and operative intervention. This will in turn translate into improved outcomes.⁵

The observation that the ultimate severity is determined by events that occur during the early stages of pancreatitis has prompted several groups of investigators to undertake studies designed to determine which clinical, chemical, or radiologic parameters might be used to identify those patients destined to experience a severe illness.⁶

Therefore the present study is designed to evaluate the clinical profile of patients suffering from acute pancreatic patients.

METHODS

This study is a prospective observational hospital based time bound study performed after the institutional ethical clearance. All the patients admitted in the surgical ward of the department of General surgery who were diagnosed for acute pancreatitis and above the age of 14 years were included after their written consent.

Acute episodes in patients with chronic pancreatitis, other co-morbid conditions like renal failure, cardiac failure, generalized debility and other factors, which adversely affect recovery from pancreatitis and patients who underwent initial treatment in another centre were excluded from study.

The study population consisted of 40 cases of acute pancreatitis that fulfilled the diagnostic criteria. The diagnostic criteria included atleast one of the three

features. They are serum amylase more than 4 times the upper limit of normal, serum Lipase more than 2 times the upper limit of normal and ultrasound or CT scan suggestive of acute pancreatitis. This was based on the U. K. Guidelines for the management of acute pancreatitis.

On admission history was collected and thorough physical examination was done. Data collection on admission included age, sex, address and clinical presentation with respect to pain vomiting, gallstones trauma and drugs was noted. History of previous episodes and co- morbidities was noted.

Statistical analysis

The Descriptive procedure displays univariate summary statistics for several variables in a single table and calculates standardized values. Normally distributed continuous variables were expressed as mean (range) and non-normally distributed variables were expressed as median. Chi-square tests were employed to find out the difference between groups of frequencies obtained for the specific statements. A P value of less than 0.05 was considered statistically significant.

RESULTS

Out of 40 patients included in study, 22 were males and 18 were females. In our study, majority of patients at the age group of 41-60 (42.5%). The youngest patient was 18 yrs and the oldest Patient was 75 years (Table 1). All the patients (100%) presented with pain abdomen, 80% of them presented with nausea/vomiting, 42.5% of them presented with fever and 30 % of them with jaundice (Table 2).

Table 1: Age and sex wise distribution of acute pancreatitis patients N=40.

| Age group in years | Male | Female | Percentage of male | Percentage of females | P value |
|--------------------|------|--------|--------------------|-----------------------|---------|
| 11-20 | 1 | 1 | 4.55% | 5.56% | 0.92 NS |
| 21-30 | 7 | 4 | 31.82% | 22.22% | |
| 31-40 | 7 | 5 | 31.82% | 27.78% | |
| 41-50 | 3 | 2 | 13.64% | 11.11% | |
| 51-60 | 2 | 2 | 9.09% | 11.11% | |
| 61-70 | 1 | 3 | 4.55% | 16.67% | |
| 71-80 | 1 | 1 | 4.55% | 5.56% | |

Table 2: symptomatology of acute pancreatitis patients N=40.

| Symptoms | No of patients | Percentage |
|--------------|----------------|------------|
| Pain abdomen | 40 | 100% |
| Fever | 17 | 42.5% |
| Vomiting | 32 | 80% |
| Jaundice | 12 | 30% |

In this study, biliary pancreatitis was found to be the most common cause for acute pancreatitis. Alcoholism was the second most common cause (32.5%).

Hyperlipidemia (1/2.5%) and traumatic (1/2.5%) pancreatitis was found in one patient each. Patients where no cause was found were labelled as idiopathic (7.5%). In males alcoholism induced pancreatitis was most common

with a second commonest as biliary etiology (Table 3). Diabetes mellitus was most prevalent in the study

population 62.5%. Obesity as defined by the current definition was prevalent in 37.5% (Table 4).

Table 3: Etiology and sex distribution of acute pancreatitis.

| Etiology | Males | Females | Percentage of males | Percentage of females | P value |
|-----------------|-------|---------|---------------------|-----------------------|---------|
| Biliary | 9 | 13 | 40.91% | 72.22% | 0.06 NS |
| Alcoholism | 11 | 2 | 50.00% | 11.11% | |
| Hyperlipidaemia | 0 | 1 | 0.00% | 5.56% | |
| Traumatic | 1 | 0 | 4.55% | 0.00% | |
| Idiopathic | 1 | 2 | 4.55% | 11.11% | |

Table 4: Percentage of comorbidities in acute pancreatitis.

| Comorbidities | No of patients | Percentage |
|-------------------|----------------|------------|
| Diabetes mellitus | 25 | 62.5% |
| Obesity | 15 | 37.5% |

DISCUSSION

Acute pancreatitis is an acute inflammatory process of the pancreas with variable involvement of other regional tissues or remote organ systems. Predicting the prognosis of a patient with acute pancreatitis at admission forms a very important strategy in management of Acute pancreatitis, considering this it enable us to practice guidelines for standardization of management of the patient which will in turn translate into improved outcomes.⁷

The present showed biliary pancreatitis (55%) as the most common cause for acute pancreatitis. The second most common cause was found to be alcoholism (32.5%). The other causes being hyperlipidaemia (2.5%), traumatic pancreatitis (2.5%) and 7.5% of patients did not show any symptoms and were labelled as idiopathic.

In biliary pancreatitis usually occurs in older adults, often have a history of cholelithiasis or intermittent, postprandial right upper-quadrant pain. Patients with acute pancreatitis present with mild to severe epigastric pain, with radiation to the back. Classically, the pain is characterized as constant, dull and boring, and is worse when the patient is supine.⁸ The discomfort may lessen when the patient assumes a sitting or foetal position. A heavy meal or drinking binge often triggers the pain.

Nausea and non-feculent vomiting are present in 75 to 90 % of patients. Vomiting may be severe and protracted. The abdominal distension was due to result of paralytic ileus arising from retroperitoneal irritation or ascites, or it may occur secondary to a retroperitoneal phlegmon. Jaundice may be occasionally seen in cases of gall stone pancreatitis, in which it represents distal CBD obstruction by gall stones.⁹ Patients may also present

with biliary colic.

On examination, severe pancreatitis was found to be associated with haemorrhage into the retro peritoneum may produce two distinctive sign's in about 3% of patients with pancreatitis namely Turner's sign (Bluish discoloration in the left flank) and Cullen's sign (Bluish discoloration of the periumbilical region).¹⁰

These are due to tracking of bloodstained retroperitoneal fluid through tissue planes of the abdominal wall to the flanks or along the falciform ligament. These signs suggest sever episode of acute haemorrhagic pancreatitis. A third rare finding called, fox sign (Bluish discoloration below the inguinal ligament or at the base of the penis) due to caudal tracking of fluid was also observed.

Epigastric and right hypochondriac tenderness was present, sometimes present diffusely the abdomen. Bowel sounds were decreased or absent. Usually there were no masses palpable, if present it could be swollen pancreas or pseudocyst or abscess.

Temperature was mildly elevated (100-101 Degree F) even in uncomplicated cases. In severe cases, orthostatic hypotension and tachycardia may be present, along with tachypnea or even dyspnoea. There may be evidence of a pleural effusion, especially on the left side.

The age and sex-wise recruitment of the subjects in the present study was in accordance with the earlier studies.^{11,12} In other studies biliary pancreatitis was most prevalent. The combined etiology of alcohol and biliary pancreatitis is 87.5% which is fairly consistent with the other studies.¹³ In males alcoholism induced pancreatitis 50% was most common, second commonest is biliary etiology (40.9%).

Kandasami P and colleagues reported that 78% of males the predominant etiology is alcoholism and 77% of females, the etiology for acute pancreatitis is biliary etiology.¹⁴ In the present study diabetes mellitus was most prevalent in the study population 62.5%. Obesity as defined by the current definition was prevalent in 37.5. %

CONCLUSION

From the results of present study, it was concluded that, most common etiology for Acute pancreatitis was biliary followed by alcoholism and traumatic pancreatitis. In Males, alcoholism induced pancreatitis was most common, second commonest was biliary etiology. Diabetes mellitus was most prevalent in the study population and obesity was found in patients. Because pancreatitis mimics many other acute abdominal conditions, the diagnosis of acute pancreatitis must include a careful consideration of differential diagnosis, which should include perforated viscus, acute cholecystitis, appendicitis, and similar conditions.

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