

Original Research Article

# Management of Acute Pancreatitis - A Prospective Study in a Rural Teaching Hospital, Sangareddy

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## Abstract

**Background:** Acute pancreatitis is an inflammatory disease of the pancreas, develops over a short period of time.

**Aim:** To evaluate the clinical presentation in different age group, gender, aetiology, mortality, morbidity and outcome of management of patients with acute pancreatitis in surgical unit of MNR Teaching Hospital.

**Materials and methods:** A prospective study was conducted in MNR Medical College Hospital over a period of 3 years. Patient details, clinical examinations, laboratory reports, treatment options, complications and mortality rate were recorded during study period.

**Results:** Among 46 patients, 29 (63.04%) were males and 17 (36.95%) were female. Most common age group with acute pancreatitis was 21-30 years (45.65%). All patients had pancreatic oedema. 26.08% acute pancreatitis was due to gallstones, 15.2% had pseudo cyst, 17.4% had ascites and 15.21% had hepatosplenomegaly. Fatality rate was 6.5%.

**Conclusion:** Conventional conservative approach for the management of acute pancreatitis has better outcome.

## Key words

Acute pancreatitis, Pancreatic oedema, Gallstones pancreatitis, Pseudocyst.

## Introduction

Acute pancreatitis is a disease with a broad-spectrum clinical findings ranging from mild to severe and lethal disease [1]. Acute pancreatitis is mainly due to gallstones and more alcohol consumption [2]. The prevalence rate of acute pancreatic disease ranges from 4.8 to 24.2 cases per 100,000 cases [1]. Incidence of acute pancreatitis is increasing over the past several decades [3]. Diagnosis and management of acute pancreatitis is a major problem for doctors in surgical as well as medical extent. The mortality rate due to pancreatitis is ranges from 4-15% and in severe cases 15-90% [4]. Pancreatitis is a common inflammatory disease caused by activation of interstitial liberation and auto-digestive enzymes [5]. The aetiology and pathogenesis of acute pancreatitis has been studied in detail, which led to an evolution in the surgical management of pancreatitis patients. The management of this disease can be practiced by various methods such as, sphinctrotomy, cholecystectomy and necrosectomy. All these interventions should be used properly as they increase mortality and morbidity [6]. Thus the objective of this study was to evaluate the role of conservative approach in the management of acute pancreatitis.

## Materials and methods

A prospective study was carried out in Surgery Department of MNR Medical College Hospital over a period of 3 years from July 2013 to August 2016. A total of 46 patients were included in this study. Patient details, clinical examination report, ultrasonography findings, biochemical profile were recorded during study period. Patients were made pain free by giving narcotics and non-narcotics depending upon the severity of pain. As per the requirements they were put on suction and drip, and also in antibiotic prophylaxis. Operative procedures such as, Cholecystectomy, Cholecystogastrostomy and Necrosectomy was

used depend upon the patients condition. Nonparametric analysis of variance (Kruskall Wallis Test) with SPSS 20.0 software was used to calculate the statistical analysis data.

## Results

Among 46 acute pancreatitis patients 63.04% were male and 36.95% were female (**Table – 1**). Major age group with acute pancreatitis was 21-30 years (45.65%). There were significant differences in age group of patients (at  $P < 0.05$ ) (**Table – 2**). In our study all patients had pancreatic oedema. 12 patients (26.08%) had gallstones, 7 patients (15.21%) had pseudo cyst, 8 (17.4%) had ascities and 7 patients (15.21%) had hepatosplenomegaly (**Table – 3**). There was increase in serum amylase level in all patients. Hypocalcaemia was found in 7 patients (15.2%). In 11 cases (23.95) bilirubin level was raised. Prothrombin time was increased in 3 patients (6.5%). In all patients haemoglobin level was normal. We followed Ranson's criteria to assess the severity and prognosis of the disease. Cholecystectomy was applied for 19 (41.30%) patients. Other operative procedures such as, cholecystogastrostomy and necrosectomy was done for 3 (6.52%) and 2 (4.34%) respectively. There was no need to use any operative procedures for 22 (47.82%) patients (**Table – 4**). 3 patients (6.5%) were died out of 46 patients.

**Table - 1:** Gender distribution in percentage.

Sex	No. of cases (%)
Male	63.04
Female	36.95

## Discussion

Acute pancreatitis varies from mild to severe and sometimes lethal. The management of this disease varies due to its diverse aetiology and pathogenesis. Pathophysiology of this disease is unknown, but it's most commonly due to the activation of auto-digestive enzymes. In this

study male (63.04%) patients were more than female (36.95%). Similar findings were reported by Tariq Mahmood, et al. [6]. Another study by Zubair Ahmad Khan, et al. showed 28 (59.6%) were female and 19 (40.42%) were male patients [7]. Major age group affected with acute pancreatitis was 21-30 years (45.65%). Tariq Mahmood, et al. and Georg P, et al. reported major age group with pancreatitis was 21-30 years [6, 8]. Another study reported major age group affected with acute pancreatitis was 20-40 years [7]. All the patients had pancreatic oedema in this present study. Similar findings reported by Tariq Mahmood, et al. [6]. Gallstones accounted for 26.08% in our study. Zubair Ahmad Khan et al. study showed 28% patients had gallstones [7]. Qureshi, et al. and Asifi, et al. recorded in their study gallstones accounted for 60% and 53% respectively [9, 10]. In this present study 15.2% patients had pseudo cyst and hepatosplenomegaly. Another study reported 25% patients had pseudo cyst and hepatosplenomegaly [6]. Cholecystectomy was done for 41.30% patients and there was no contraindication of surgery. According to the study done by Tariq Mahmood, et al., 45% patients gone through cholecystectomy [6]. In our study cholecystogastrostomy and necrosectomy was done for 3 (6.52%) and 2 (4.34%) respectively. Our data was comparable with other studies [6, 11]. The overall mortality rate in our study was 6.5%. Similar mortality rate was found in Zubair Ahmad Khan et al. study [7]. But compared to our study report, Asifi, et al. and Taj, et al. showed higher mortality rate in their study, 20% and 22.2% respectively. A limitation of our study was no follow up of the cases after surgery. There is need to do further studies on assessment of efficacy of antibiotic uses and early enteral feeding in acute pancreatitis patients.

### Conclusion

According to our study acute pancreatitis is more common in young males and most of them complaints with gallstones. Acute pancreatitis may be due to presence of gallstones or heavy

intake of alcohol. This disease has no strong association with age, gender. We need to be careful with the operative procedures for the management of pancreatitis. Appropriate use of surgical and non-surgical procedures can reduce the chances of death due to acute pancreatitis.

**Table - 2:** Age group distribution of acute pancreatitis patients (%).

Age group (Years)	No. of cases (%)
10-20	6.52
21-30	45.65
31-40	15.22
41-50	19.56
51-60	8.7
>60	4.35

**Table - 3:** Causes of Acute Pancreatitis (%).

Causes	No. of cases (%)
Pancreatic oedema	100
Gallstones	26.08
Pseudocyst	15.21
Ascities	17.4
Hepatosplenomegaly	15.21

**Table - 4:** Operative procedures performed in this study (%).

Operative procedures	No. of cases (%)
Cholecystectomy	41.30
Cholecystogastrostomy	6.52
Necrosectomy	4.34
No operation	47.82

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