

Original Research

Assessment of clinical profile of patients with acute pancreatitis- A clinical study

Dr. Santosh Kumar Gupta¹, Dr. Manzoor Ahmed²

¹Associate professor, Department of General Surgery, TSM Medical College and Hospital Lucknow, Uttar Pradesh, India;

²Assistant professor, Department of General Surgery, TSM Medical College and Hospital Lucknow, Uttar Pradesh, India;

ABSTRACT:

Background: The present study was conducted to assess clinical profile of patients with acute pancreatitis. **Materials & Methods:** 78 cases of acute pancreatitis of both genders (males- 52, females- 26) was recorded. In all clinical profile were noted. **Results:** Maximum cases was seen in age group 31-40 years (30) followed by 41-50 years (28). Acute edematous was seen in 48, acute necrotizing in 12 and acute on chronic pancreatitis in 18 cases. The mean hospital stay was 6.4 days, ICU admission was 15 days, organ failure was seen in 4 patients and mortality in 2. **Conclusion:** Most of the patients had abdominal pain, tenderness and jaundice and acute edematous type was commonly seen among all patients.

Key words: abdominal pain, tenderness, Acute pancreatitis.

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Corresponding author: Dr. Manzoor Ahmed, Assistant professor, Department of General Surgery, TSM Medical College and Hospital Lucknow, Uttar Pradesh, India;

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INTRODUCTION

Acute pancreatitis is a common disease with wide clinical variation and its incidence is increasing. The average mortality rate in severe acute pancreatitis approaches 2–10 %. Severe acute pancreatitis (SAP) develops in about 25% of patients with acute pancreatitis. Severe acute pancreatitis is a two phase systemic disease.¹ The first phase is characterised by extensive pancreatic inflammation and/or necrosis and is followed by a systemic inflammatory response syndrome (SIRS) that may lead to multiple organ dysfunction syndrome (MODS) with in the first week.²

The clinical features and the severity of AP are related to extra pancreatic organ failure secondary to the patient's systemic inflammatory response syndrome (SIRS) elicited by acinar cell injury. The spectrum of AP ranges from interstitial pancreatitis, which is a mild and self-limited disorder to necrotizing pancreatitis.³ Almost all patients with AP have acute upper abdominal pain at onset typically accompanied

in approximately 90% of patients by nausea and vomiting.^{4,5}

The diagnosis of acute pancreatitis requires two of the following three features: abdominal pain consistent with acute pancreatitis (acute onset of persistent, severe, epigastric pain often radiating to the back), serum lipase activity at least three times greater than the upper limit of the normal and characteristic finding of acute pancreatitis on Contrast Enhanced Computed Tomography (CECT) and less commonly Magnetic Resonance Imaging (MRI) or Transabdominal Ultrasonogram.⁶ The present study was conducted to assess clinical profile of patients with acute pancreatitis.

MATERIALS & METHODS

This study was conducted in general surgery department on 78 cases of acute pancreatitis of both genders (males- 52, females- 26). The enrollment was done after obtaining their consent and ethical approval. Patients were classified into mild, moderate,

and severe acute pancreatitis based on Ranson’s score, Glasgow scoring system.

Patients information such as name, age, gender etc. was recorded. A detailed history of all patients was recorded. All underwent haematological, biochemical and imaging. Associated medical disease, like

hypertension, diabetes mellitus, chronic renal failure, bronchial asthma, chronic obstructive pulmonary disease and ischemic heart disease were noted. Results were analyzed statistically. P value less than 0.05 was considered significant.

RESULTS

Table I Age wise distribution

Age (years)	Number	P value
21-30	10	0.021
31-40	30	
41-50	28	
51-60	6	
>60	4	

Table I shows that maximum cases was seen in age group 31-40 years (30) followed by 41-50 years (28). The difference was significant (P< 0.05).

Table II Classification of cases based on clinical grade

Clinical grade	Number	P value
Acute edematous	48	0.01
Acute necrotizing	12	
Acute on chronic pancreatitis	18	

Table II, graph I shows that cases were of acute edematous seen in 48, acute necrotizing in 12 and acute on chronic pancreatitis in 18 cases. The difference was significant (P< 0.05).

Graph I Classification of cases based on clinical grade

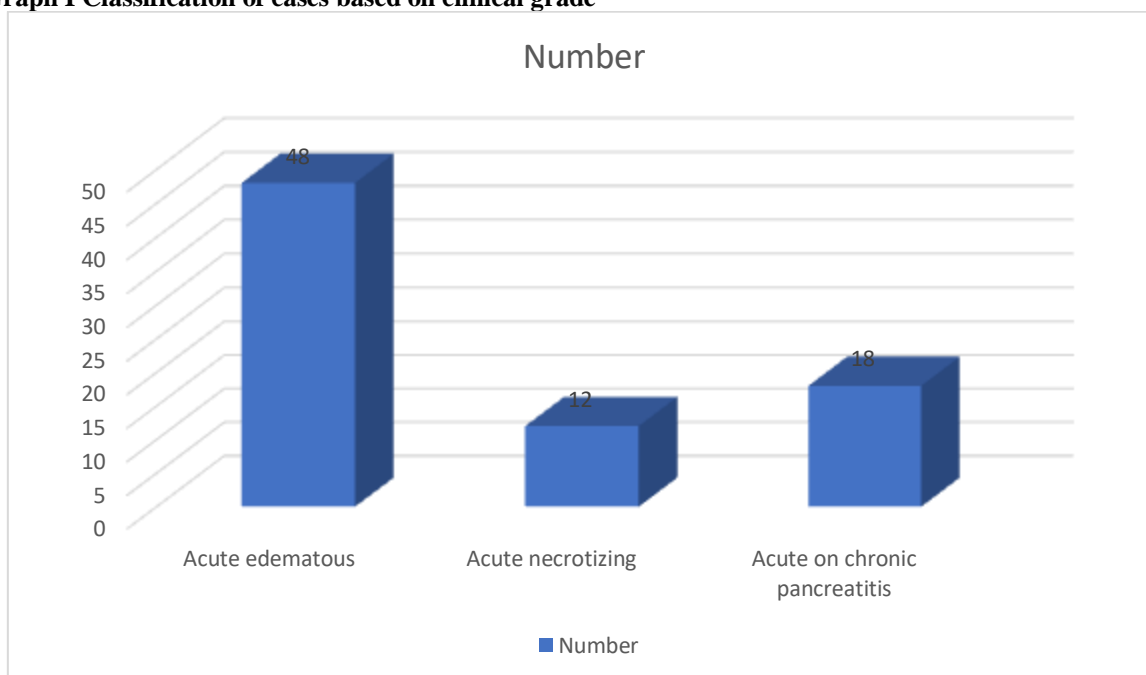


Table III Classification based on CT grade

CT grade	Number	P value
Normal	18	0.07
Grade 1-2	36	
Grade 3-5	24	

Table III shows CT grade was normal in 18, grade 1-2 in 36 and grade 3-5 in 24 cases. The difference was significant (P< 0.05).

Table IV Assessment of parameters

Variables	Number
Hospital stay (Days)	6.4
ICU admission (Days)	15
Organ failure	4
Mortality	2
Clinical symptoms	
Abdominal pain	56
Vomiting	34
Abdominal distension	14
Epigastric tenderness	69
Fever	5
Shock	7
Jaundice	17

Table IV shows that mean hospital stay was 6.4 days, ICU admission was 15 days, organ failure was seen in 4 patients and mortality in 2. Clinical symptoms were abdominal pain in 56, vomiting in 34, abdominal distension in 14, epigastric tenderness in 69, fever in 5, shock in 7 and jaundice in 17 patients.

DISCUSSION

According to the severity, acute pancreatitis is divided into mild acute pancreatitis (absence of organ failure and local or systemic complications, moderately severe acute pancreatitis (no organ failure or transient organ failure less than 48 hours with or without local complications) and severe acute pancreatitis (persistent organ failure more than 48 hours that may involve one or multiple organs).⁷ Initial evaluation of severity should include assessment of fluid loss, organ failure (particularly cardiovascular, respiratory, or renal compromise), measurement of the APACHE II score and systemic inflammatory response syndrome (SIRS) score.⁸ Although measurement of amylase and lipase is useful for diagnosis of pancreatitis, serial measurements in patients with acute pancreatitis are not useful to predict disease severity, prognosis, or for altering management.⁹ The present study was conducted to assess clinical profile of patients with acute pancreatitis.

In present study, age group 21-30 years had 10, 31-40 years had 30, 41-50 years had 28 and 51-60 years had 6 and >60 years had 4 cases. Ramu R et al¹⁰ found that among 436 cases studied 318 (72.9%) were males and 118 (27.1%) were females. Epigastric pain without radiation to the back (51.6%) was the most common clinical presentation. Alcohol was the most common etiological factor seen in 42.4% followed by idiopathic pancreatitis (IP) (36.9% cases) and then by gallstone/biliary pancreatitis (14.5%). Acute fluid collection was the most common local complication seen in 29.1% cases and respiratory system involvement was the most common organ involvement seen in 16.5% of cases.

We found that cases were of acute edematous seen in 48, acute necrotizing in 12 and acute on chronic pancreatitis in 18 cases. CT grade was normal in 18, grade 1-2 in 36 and grade 3-5 in 24 cases. Clinical

symptoms were abdominal pain in 56, vomiting in 34, abdominal distension in 14, epigastric tenderness in 69, fever in 5, shock in 7 and jaundice in 17 patients. Vengadakrishnan et al¹¹ in their study a total of 110 patients were analysed. 50 patients required Intensive care, among them 9 patients (18%) died. 20 patients (18.2%) had MODS, 15 patients (13.6%) had pleural effusion, 9 patients (8.2%) had pseudocyst, 2 patients (1.8%) had hypotension, 2 patients (1.8%) had ARDS and 2 patients (1.8%) had DKA. In relation to various severity indices, high score of CRP, LDH and CT severity index was associated with increased morbidity and mortality. 15 patients (13.6%) underwent open necrosectomy surgery, 3 patients (2.7%) underwent laparoscopic necrosectomy and 7 patients (6.4%) were tried step up approach but could not avoid surgery. Step up approach and surgery did not have a significant reduction in the mortality.

We observed that mean hospital stay was 6.4 days, ICU admission was 15 days, organ failure was seen in 4 patients and mortality in 2 patients. Chauhan et al¹² found that majority of patients 22 (44.0%) were in age group ranging from 41 to 60 years. Males were dominant (58%). The most common etiology was alcoholism followed by gall stone. The majority of patients were found with abdominal pain (100.0%). The majority of the patients were having moderate Balthazar CT Severity Index (CTSI) (54.0%). In all, 43 patients were having pancreatic complications and pancreatic necrosis was the commonest; 31 developed extra-pancreatic complications, among which pleural effusion was the commonest. Some patients were having multiple complications. The duration of hospital stay was highest in severe group of Balthazar CTSI. Rise in total leucocyte count, serum amylase level and low calcium levels were significantly associated with increase in pancreatic/extra-pancreatic complications. There was only 1 (2%) patient who died and remaining 49 (98%) patients were discharged.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that most of the patients had abdominal pain, tenderness and jaundice. Maximum patients were of acute edematous type.

REFERENCES

1. Besselink MG, Verwer TJ, Schoenmaeckers EJ, Buskens E, Ridwan BU, Visser MR, et al. Timing of surgical intervention in necrotizing pancreatitis. *Arch Surg.* 2007; 142(12):1194-1201.
2. Negi N, Mokta J, Sharma B, Sharma R, Jhobta A, et al. Clinical Profile and Outcome of Acute Pancreatitis: A Hospital- Based Prospective Observational Study in Subhimalayan State. *J Assoc Physicians India.* 2018; 66(3):22-24.
3. Baig SJ, Rahed A and Sen S. A prospective study of the etiology, severity and outcome of acute pancreatitis in Eastern Indian. *S Trop Gastroenterol* 2008; 29:20-22.
4. Sivasankar A and Kannan DG. Outcome of severe pancreatitis. *Hepatobiliary pancreat Dis Int.* 2006; 5(4): 599-604.
5. Ramu R, Paul V, Devipriya S and Philip NC. Etiology, clinical profile and outcome of acute pancreatitis in a tertiary care teaching hospital in rural South India: a ten year retrospective study. *Int Surg J.* 2019; 6:3794-3799.
6. Raghuvanshi S, Gupta R, Vyas MM and Sharma R. CT Evaluation of Acute Pancreatitis and its Prognostic Correlation with CT Severity Index. *J Clin Diagnos Res.* 2016; 10(6):TC06- TC11.
7. Ahlawat V and Godara R. Clinical Study of Demographic Profile, Etiology, Severity and Outcome of Acute Pancreatitis in a Tertiary Care Teaching Hospital in Northern India. *J Gastrointest Dig Syst.* 2018; 8:575.
8. Yeung Y, Yeung KLB and Wai CYA. APACHE system is better than Ranson system in prediction of severity of acute pancreatitis. *Hepatobiliary Pancreat Dis Int.* 2006; 5: 294-299.
9. Ahmed K, Ahad MA, Alim MA and Ekram A. Clinical profile of acute pancreatitis in a teaching hospital. *Bangladesh Medical Journal Khulna.* 2017; 49(1-2): 7-12.
10. Ramu R, Paul V, Devipriya S, Philip NC. Etiology, clinical profile and outcome of acute pancreatitis in a tertiary care teaching hospital in rural South India: a ten year retrospective study. *International Surgery Journal.* 2019 Sep 26;6(10):3794-9.
11. Vengadkrishnan K, Koushik AK. A study of the clinical profile of acute pancreatitis and its correlation with severity indices. *International journal of health sciences.* 2015 Oct;9(4):410.
12. Chauhan Y, Jindal N, Verma RK, Tyagi PK, Rana M, Singh S. A clinical profile and outcome of patients with acute pancreatitis: A prospective study in North India. *Arch Int Surg* 2018;8:132-8.