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Clinical Profile of Diagnosed Cases of Acute Pancreatitis Coming to a Tertiary Care Hospital

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ABSTRACT

Introduction: Pancreatitis is a condition in which inflammation of the pancreas occurs. When the digestive enzymes are triggered until they are released into the small intestine and start assaulting the pancreas, pancreatic damage occurs. Pancreatitis is associated with exocrine and endocrine (sometimes) parenchyma damage, resulting in clinical manifestations ranging in severity from a mild, self-limited illness to an acute inflammatory phase that threatens life.

Objective: To study the clinical profile of Diagnosed cases of Acute Pancreatitis coming to a tertiary care hospital.

Methods: Diagnosed cases of Acute Pancreatitis coming to our hospital. A total of 50 consecutive cases fulfilling the eligibility criteria were taken for study after informed consent. Results: Mean age of the study cases was 41.56 years with over half of the cases (52%) were between 21-40 years of age. Male predominance was seen among study cases. The most common symptoms among presenting cases were a pain in the abdomen (100%) and vomiting (76%). The most common aetiology for pancreatitis among study cases was alcohol. Good outcome was seen in 46% of cases while the mortality rate was 2%. Mean hospital stay among study cases ranges from 1-30 days with a mean stay of 10.2 days.

Conclusion: Identification of patients at risk for mortality early in the course of acute pancreatitis is an important step in improving outcome.

Key Words: Acute pancreatitis, Pain in abdomen, Alcohol

INTRODUCTION

The pancreas is a major gland situated behind the stomach and next to the small intestine. It releases powerful digestive enzymes into the small intestine to aid food digestion. There are two main things the pancreas does. It stimulates the hormones insulin and glucagon in the bloodstream, too. These hormones allow the body to monitor the way food is used for energy.¹ Pancreatitis is a disease where the pancreas is inflamed. Pancreatic damage occurs when digestive enzymes are stimulated before they are released into the small intestine and begin targeting the pancreas. Exocrine and endocrine (sometimes) parenchymal injury are correlated with pancreatitis, resulting in clinical manifestations varying in intensity from a mild, self-limited disease to a life-threatening acute inflammatory phase, which may range in duration from a temporary assault to a permanent pancreatic function loss. Pancreas inflammatory disease

can be known as acute or chronic pancreatitis.^{2,3} A sudden inflammation that persists for a brief period is acute pancreatitis. It can range from moderate pain to a serious, life-threatening illness. Chronic pancreatitis is an inflammation of the pancreas that is long-lasting. It most commonly occurs after an acute pancreatitis episode.^{4,5} The aetiology of pancreatitis varies according to geographical location, but alcohol, gallstones, metabolic factors and medications are most frequently involved. By both clinical and routine radiological approaches, the pancreas is a hard organ to test. The inflammatory pathology involving the pancreas may be included in the differential diagnosis of other abdominal pain disorders. In most patients, the combination of sufficient clinical results and laboratory testing allows for a correct diagnosis of acute pancreatitis. On the other hand, chronic pancreatitis forms a far more complicated clinically or biochemically assessable entity.⁶

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MATERIAL AND METHODS

This is a Prospective, observational, Clinical study on Diagnosed cases of Acute Pancreatitis coming to our hospital. A total of 50 consecutive cases fulfilling the eligibility criteria were taken for study after informed consent. Valid informed consent was taken from patients or patients relatives to be included in the Study. The clinical, laboratory and radiological data were collected from each patient diagnosed with acute pancreatitis within 24 hours of presentation.

Inclusion Criteria: All adults (> 18 years) of both genders. Cases of acute pancreatitis with raised serum lipase/ amylase levels and confirmed on USG/ CT scan.

Exclusion Criteria: Pancreatitis with gut perforation & Pancreatitis in pregnancy.

RESULTS

Table 1: Distribution of the subjects in the sample as per age group

Age Group (years)	Number	Percentage
< 20	3	6.0%
21-30	13	26.0%
31-40	13	26.0%
41-50	7	14.0%
51-60	5	10.0%
> 60	9	18.0%
Total	50	100.0%

Mean age of the study cases was 41.56 years with over half of the cases (52%) were between 21-40 years of age.

Table 2: Distribution as per gender of the study subjects

Sex	Number	Percentage
Male	32	64.0%
Female	18	36.0%
Total	50	100.0%

Male predominance was seen among study cases with 64% males to 36% females.

Table 3: Distribution of the subjects of the study as per Presenting Symptoms

Symptoms	Number	Percentage
Pain in Abdomen	50	100.0%
Fever	21	42.0%
Vomiting	38	76.0%
Jaundice	14	28.0%

Most common symptoms among presenting cases was pain in abdomen (100%) and vomiting (76%). Other symptoms include fever (42%) and jaundice (28%).

Table 4: Distribution of the subjects of the research as per Pancreatitis Etiology

Aetiology	Number	Percentage
Alcoholism	26	52.0%
Biliary/ Gall Stones	12	24.0%
Idiopathic	12	24.0%
Total	50	100.0%

The most common aetiology for pancreatitis among study cases was alcohol (52%) followed by biliary calculi (24%) and idiopathic (24%).

Table 5: Distribution of the study subjects as per Outcome

Outcome	Number	Percentage
Cured	23	46.0%
Ascites & Pleural effusion	1	2.0%
Organizing necrosis	6	12.0%
Pancreatic fluid collection	12	24.0%
Pseudocyst of Pancreas	7	14.0%
Expired	1	2.0%

Good outcome was seen in 46% of cases while mortality rate was 2%. Associated complications include pancreatic fluid collection (24%), pancreatic pseudocyst (14%), organizing necrosis (12%) and ascites/ pleural effusion (2%).

Table 6: Distribution of the study subjects as per mean hospital stay

Hospital stay	
Range (days)	1-30 days
Mean (days)	10.2 days
Std. Deviation	6.12 days

Mean hospital stay among study cases ranges from 1-30 days with a mean stay of 10.2 days.

DISCUSSION

The mean age of the study cases was 41.56 years with over half of the cases (52%) were between 21-40 years of age. The findings show that pancreatitis occurs in relatively younger adults. Male predominance was seen among study cases with 64% males to 36% females with male to female ratio as 1.78:1. In a similar study by Shakeel et al,⁷ mean age of study subjects was 37.4 years with the highest patients in the age group of 20 – 39 years (51%) followed by 40 – 59

years (36%). Males constituted 80% and females 20%. In another study on acute pancreatitis by Prasad et al,⁸ out of 40 patients, 22 were males and 18 were females. The majority of patients were in the age group of 21-40 (57.5%). The study by Negi N et al⁹ included 89 (72.35%) male and 34 (27.65%) female patients with a male to female ratio were 2.6:1. The age of patients ranged between 18 to 81 years. The mean age was 42.89 ±12.53 years. The result observed in the present study and that by other authors showed that pancreatitis mainly affects younger adults with the male being affected more than females. The gender bias can be attributed to the aetiology of the pancreas i.e. alcohol which is consumed predominantly by males in the Indian community. In the present study, the most common symptoms among presenting cases were a pain in the abdomen (100%) and vomiting (76%). Other symptoms include fever (42%) and jaundice (28%). Although pain in the abdomen is the most common symptom of pancreatitis, no specific features easily distinguish pain caused by pancreatitis, from that caused by other abdominal conditions. In a study by Shakeel MD et al, abdominal pain was the presenting symptom in all the patients with acute and acute chronic pancreatitis. Our results also correlate with a study conducted by Lee MG et al¹⁰ in which 30 (86%) patients out of 35 cases had abdominal pain. Also in this study 16 out of 31 chronic pancreatitis patients did not have pain. In another study by Prasad et al, all the patients with acute pancreatitis presented with pain abdomen, 80% of them presented with nausea/ vomiting, 42.5% of them presented with fever and 30 % of them with jaundice. The most common aetiology for pancreatitis among study cases was alcohol (52%) followed by biliary calculi (24%) and idiopathic (24%).

In a study by Prasad et al, the most common aetiology observed among male cases of acute pancreatitis was alcoholism (50%) while in female cases was biliary pathology (72%). In Negi et al, the major etiological groups for cases of acute pancreatitis were: alcohol 73 cases (59.3%) and gallstones, (35.6%). Panda et al¹⁰ in their study observed alcohol as the most common aetiology (54.84%) followed by idiopathic cases (48.39%). Good outcome was seen in 46% of cases while the mortality rate was 2%. Associated complications include pancreatic fluid collection (24%), pancreatic pseudocyst (14%), organizing necrosis (12%) and ascites/ pleural effusion (2%). Persistent organ failure > 48 hours i.e. severe acute pancreatitis (SAP) was seen in 8 cases (16%). Macherla R et al¹¹ in their study observed complications in acute pancreatitis as the pancreatic fluid collection (20%), organizing necrosis (14%) and ascites/ pleural effusion (6%). Severe acute pancreatitis was seen in 8 cases (20%). Yadav J et al¹² in their study observed the following complications: pancreatic pseudocyst (27.7%), organizing necrosis (39.5%) and severe acute pancreatitis (35.2%). Incidence of severe acute pancreatitis as 19.8% and 23% respectively in previous

studies.^{13,14} The mortality rate in the study by Negi et al was 5.7% while in the study by Bota S et al the mortality rate was 4.6%. Mortality rates observed in the previous studies was also in the range of 6-15%.

CONCLUSION

Identification of patients at risk for mortality early in the course of acute pancreatitis is an important step in improving outcome. The mean age of the study cases was 41.56 years with over half of the cases (52%) were between 21-40 years of age. Male predominance was seen among study cases with 64% males to 36% females. The most common symptoms among presenting cases were a pain in the abdomen (100%) and vomiting (76%). The most common aetiology for pancreatitis among study cases was alcohol (52%) followed by biliary calculi (24%) and idiopathic (24%). Good outcome was seen in 46% of cases while the mortality rate was 2%. Mean hospital stay among study cases ranges from 1-30 days with a mean stay of 10.2 days.

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