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Gastroenterology

A STUDY ON ACUTE PANCREATITIS IN THANJAVUR MEDICAL COLLEGE, THANJAVUR, TAMILNADU, INDIA

Dr. U. Aravindan* MS, MCh (SGE), Professor And Hod, Department Of Surgical Gastroenterology, Thanjavur Medical College, Thanjavur. *Corresponding Author

Dr. M. Ponchidambaram MS, MCh (SGE), Assistant Professor, Department Of Surgical Gastroenterology, Thanjavur Medical College, Thanjavur.

Dr. S. Narayanan Post Graduate, Department Of General Surgery, Thanjavur Medical College, Thanjavur.

ABSTRACT The research study was designed to recognize the clinical picture of acute pancreatitis in the Indian patients to evaluate common aetiologies, role of investigations and outcome of early conservative management. This study was conducted in 54 patients of acute pancreatitis who were admitted in THANJAVUR MEDICAL COLLEGE during the period of September 2017 TO September 2018. This study was defined to evaluate conservative management of mild to moderate pancreatitis. 54 cases of acute pancreatitis were admitted and investigated and treated. Observations were made with regards to common presentation, sex distribution, common aetiology and blood parameters especially serum lipase and serum amylase. The highest incidence of acute pancreatitis was found in the age group of 25 to 35 years followed by the age group of 35 to 55 years. Acute pancreatitis was found more commonly in males compared to females. This may be due to effect of alcohol addiction in males. In acute pancreatitis, serum lipase level may be elevated more consistently and for longer half-life than serum amylase.

The clinical pattern of acute pancreatitis varies in different patients. Though gall stone induced acute pancreatitis is common in western countries, alcohol is the main etiological factor in our study. It is recommended that all patients with pancreatitis should undergo ultrasound within 24 hours of admission as it confirms presence of gallstones and severe pancreatitis. We have started oral feeding in all cases of mild to moderate pancreatitis.

KEYWORDS : Acute Pancreatitis(AP), Alcohol, Gallstones, Abdominal Pain, Serum Amylase

AIM OF STUDY:

The research study was designed to recognize the clinical picture of acute pancreatitis in the Indian patients to evaluate common aetiologies, role of investigations and outcome of early conservative management.

INTRODUCTION

Acute pancreatitis is a common cause of acute abdominal pain requiring hospital admission. The attack is mild in about 80% of patients who will show marked improvement within 48 hours. In some 20% of patients however it is often severe with high morbidity and mortality. The first 12 hours are extremely important to provide appropriate management which will decrease morbidity and mortality. Nearly 80% of cases of AP worldwide are caused by gallstone obstruction and high alcohol intake. It is necessary to identify the aetiology to institute definitive management and prevent further incidence. There appears to be an increase in the incidence of acute pancreatitis. This rise in incidence has been attributed to increased alcohol consumption but may well reflect improved diagnostic capability during this period. No seasonal or weekly pattern of acute pancreatitis has been observed. Men are affected much more than women.

MATERIALS AND METHODS

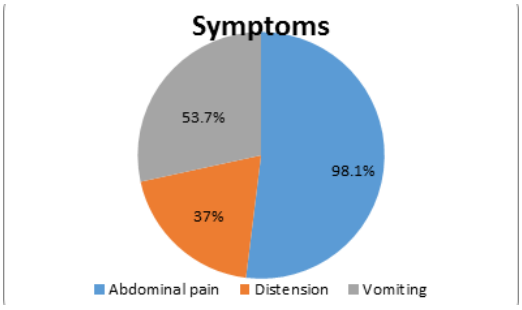
This study was conducted in 54 patients of acute pancreatitis admitted in THANJAVUR MEDICAL COLLEGE between September 2017 and September 2018. 54 cases of acute pancreatitis were admitted and investigated and treated. Observations were made with regards to common presentation, sex distribution, common aetiology and common blood parameters. All patients were assessed managed either conservatively or surgically the findings were recorded in a Proforma. The proforma was designed to record the history, chief complains, past history, family history, personal history, diet history, alcohol consumption, obstetric and menstrual history (in case of female patient), physical examination , local examination, operative history, investigations and management. The clinical presentation associated medical conditions, laboratory and radiological investigations, severity, management and outcome were studied. The episode of pancreatitis was categorized based on severity using clinical examination and radiological investigations, and those with serious co-morbidities were admitted to ICU and monitored. All patients had full blood count and blood chemistry including serum amylase, serum lipase, CRP estimation done and biliary pancreatitis was diagnosed when biliary stones were demonstrated by ultrasonography which was performed within 24 hours of admission and OGD SCOPY also done in all patients. CT scan of the abdomen was performed on all patients. All patients were treated conservatively initially with intravenous fluids and nil orally up to 24 hours of admission. Patients who had no signs of paralytic ileus were started enteral feeding after 24 hours of admission.

RESULTS AND DISCUSSION:

In the study of 54 cases of acute pancreatitis following observations are made.

Age Group:

Most commonly affected age group in this study is 25 to 35 years and mean age is 29years. As compared to females, male patients are more affected by acute pancreatitis in our study. Presenting Symptoms: From the table below it is evident that abdominal pain is the commonest presenting symptom, present in almost all the patients, of these 50% of patients presented with typical epigastric pain that radiate to the back.



Etiology:

TABLE 1: Etiology of Acute Pancreatitis in Thanjavur Medical College

ETIOLOGY	NO.OF PATIENTS	PERCENTAGE (%)
ALCOHOL	52	96.3 %
IDIOPATHIC	2	3.7 %

Blood Investigations

Serum Amylase: It is evident from this study, increased level of serum amylase is a regular feature of acute pancreatitis. But the pattern of the hyper-amylasemia is extremely variable and highly sensitive but not specific. Pattern increase or decrease, does not correspond with the severity, complications or treatment modality.

TABLE 2 . Investigations of Amylase

SERUM AMYLASE	NO OF PATIENTS	PERCENTAGE (%)
<80	3	5.6 %
80 – 499	36	66.7 %
500 – 999	7	13 %
>1000	8	14.8%

Serum Lipase: Serum lipase is only secreted by the pancreas and thus more specific. In acute pancreatitis, serum lipase level may be elevated more consistently and for longer half-life than serum amylase. In our study it is seen elevated in all patients.

TABLE 3. Investigations of Lipase

SERUM LIPASE	NO OF PATIENTS	PERCENTAGE(%)
<100	12	22 %
100 – 499	23	42.6 %
500 – 999	15	27.8 %
>1000	4	7.4 %

Others: Elevated Total WBC Count was suggestive of the infection in the pancreas but it was nonspecific. Altered renal function test was noted in about 2 patients was due to systemic complications of Acute pancreatitis which lead to shock and renal failure (Systemic Inflammatory Response Syndrome – SIRS). Serum bilirubin, Serum Alkaline Phosphatase, Serum Glutamate Pyruvate Transaminase were elevated in 8 cases of Acute pancreatitis due to biliary tract disease or due to pathology of the pancreas involving the head and periampullary region. In majority of patients, X-Ray chest did not reveal any information about diagnosis; Raised hemidiaphragm may be seen due to either pancreatic or retropancreatic oedema or due to pseudocyst. Pleural effusion was present as the systemic complications of Acute pancreatitis. In 26% of patients dilated bowel loops suggestive of paralytic ileus was present on X-ray abdomen erect.

Ultra-Sonography:

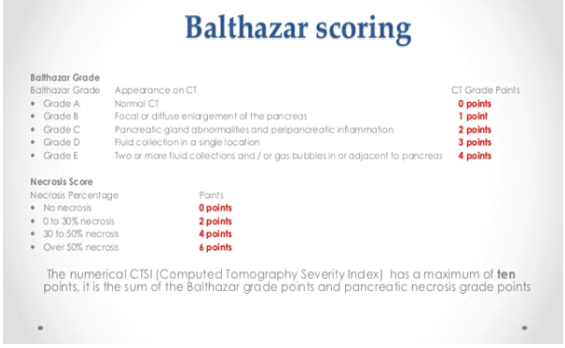
USG was performed as and when required in all the patients of this study. Thus it is evident that almost all types of acute pancreatitis can be diagnosed by ultrasonography, as USG has high sensitivity.

TABLE 4. USG Findings of Acute Pancreatitis

Usg Findings	No Of Patients	Percentage (%)
Odematous Pancreas	36	66.7%
Peripancreatic Fluid Collection	2	3.7%
Pancreatic Calcification	2	3.7%
Pseudocyst	5	9.3%
Ascites	2	3.7%
Pleural Effusion	3	5.6%
Normal	4	7.4%

CECT Abdomen

Contrast enhanced computerized tomography (CECT) abdomen is the most valuable tool for diagnosis of acute pancreatitis and grading of its severity and its local complication. Out of 54 patients, all underwent CT abdomen and pelvis. The Balthazar scoring of these patients ranges from 1 to 10.



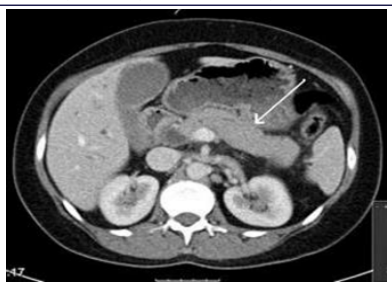


Figure 1: Grade 1 – Mild Acute Pancreatitis

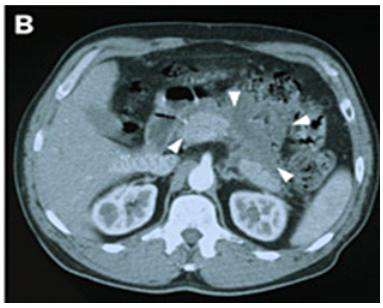


Figure 2: Grade 2 – Moderate Acute Pancreatitis

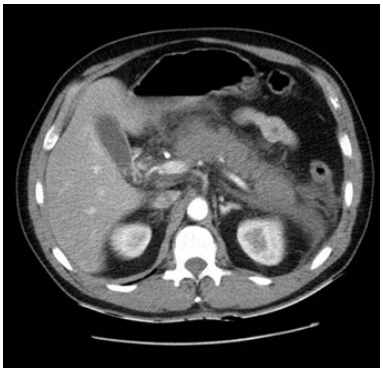


Figure 3: Grade 3 – Severe Acute Pancreatitis

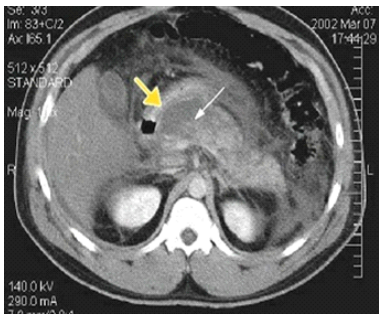


Figure 4: Grade 4 – Necrotising Acute Pancreatitis

Table 5: Grading of Acute Pancreatitis

CT GRADING	No.of PATIENTS	PERCENTAGE(%)
GRADE 1	30	55.6%
GRADE 2	14	25.9%
GRADE 3	8	14.8%
GRADE 4	1	1.9%

Management

The principles of conservative management followed in each case were adequate analgesia, correction of fluid and electrolytes imbalance, complete GI tract rest & Antibiotics.

Table 6: Type of Management of Acute Pancreatitis

MANAGEMENT	NO OF PATIENTS	PERCENTAGE
CONSERVATIVE	53	98.1%
SURGICAL	1	1.9%
TOTAL	54	

Ryle's tube was inserted in all patients and was found to decrease vomiting, protect patients from aspiration and decompress the gut in ileus. Continuous radiological, biochemical and clinical monitoring was done in every case to prevent complications and for better prognosis of the patients. Most of the patients who did not show signs of paralytic ileus were started enteral feeding 24 hours after admission.

Complications

During this study, total 18% of patients developed complication. Acute fluid collection- 4 patients, Pseudocyst – 5 patients, pleural effusion – 2 patients, necrotising pancreatitis – 1 patient

CONCLUSION:

The highest incidence of acute pancreatitis was found in the age group of 25 to 35 years followed by the age group of 35 to 45 years. It was relatively less common in the extremes of age groups. Acute pancreatitis was found more commonly in males compared to females. This may be due to effect of alcohol addiction in males due to alcoholism. Acute pancreatitis usually presents with abdominal pain, nausea, vomiting, fever, jaundice and abdominal distension and physical examination reveals epigastric tenderness, guarding, rigidity, pyrexia, shock mostly. Most of acute pancreatitis were of the mild type. The most common systemic complications were pulmonary, followed by renal complications like ARF. DIC was found in one patient. The most common local complications were acute fluid collection and pancreatic pseudocyst. Pancreatic necrosis, pancreatic abscess were found only in patients having severe pancreatitis. Serum amylase and serum lipase are the best biochemical indicators of the disease, supplemented by serial ultrasound examinations of the abdomen. The prognostic factors for this disease are hyperamylasemia, hyperglycemia, reflecting a poorer outlook. Prognosis can also be assessed by ultrasonography and computed tomography delineating local complications. USG abdomen is a good, readily available, non-invasive means to detect local pathology, which may be readily repeated. CECT abdomen is sensitive and specific detecting the severity and grading of acute pancreatitis based on BALTHAZAR CT SCORING SYSTEM. Peripancreatic fluid collection and pancreatic necrosis are predictors of severity of pancreatitis on USG & CT scan findings. So, serum amylase level more than threefold of normal level and pancreatic fluid collection is main predictor of severity of pancreatitis in our study. About 99% of patients were treated conservatively. The initial management of AP should be conservative; with surgery reserved for case having uncertainty of diagnosis, very severe type not responding to medical therapy and complications of disease. Surgical management was done in 1% of patients.

Conflict of Interest:

Authors don't have any conflict of interest

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