



A Study of 50 Cases of Acute Pancreatitis in Co-Relation With its Clinical, Biochemical and Radiological Features

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ABSTRACT

In this study, 50 cases of acute pancreatitis were taken. Study was done in surgery department of JLNMC, Bhagalpur, Bihar from October 2015 to September 2016. All cases of acute pancreatitis were registered fulfilled the inclusion criteria. This study was done to see the co-relation of clinical study, biochemical changes and radiological findings in diagnosis of severity of acute pancreatitis. The disease was most common in the age group 20-50 years with male predominance. For each and every patient detailed clinical history was recorded and were subjected to serial hematological specific investigations like serum amylase and lipase as well as radiological tests like ultrasonography of the abdomen and contrast enhanced computed tomography in selected cases. Out of the 50 patients included, 35 were males and 15 were females. 80% of patients had pain predominantly in the epigastric region which was relieved in the majority by sitting forward with knees flexed against the chest. 49 patients had elevated serum amylase. 70% of patients had alcohol as the main etiological factor. USG was 70-90% sensitive in detecting Acute pancreatitis. Complications were present in 25 out of 50 patients and Pseudocyst was present in 6 of the patients

KEYWORDS : Acute pancreatitis, ultrasonography, serum amylase, Pseudocyst

Introduction

Acute pancreatitis is a life threatening condition. The name Pancreas is derived from the Greek "Pan" (all) and "Kreas" means (flesh). The clinical features and the severity of acute pancreatitis are related to extrapancreatic organ failure secondary to the patient's systemic inflammatory response syndrome (SIRS) elicited by acinar cell injury. The intrapancreatic release of active pancreatic enzymes leads to pancreatic autodigestion, setting up a vicious cycle of active enzymes damaging vascular endothelium, interstitium and acinar cells. The destruction spreads along the gland and into the peripancreatic tissues. The spectrum of acute pancreatitis ranges from interstitial pancreatitis, which is a mild and self limited disorder to necrotizing pancreatitis. Almost all patients with acute pancreatitis have acute upper abdominal pain at onset are typically accompanied in approximately 90 percent of patients by nausea, vomiting, restlessness, agitation and relieves on bending forward. The warning signs of pancreatitis include fever suggesting infection, hypovolaemia due to fluid accumulation, Grey Turner sign (flank discoloration) and Cullen sign (periumbilical discoloration) suggesting haemorrhagic pancreatitis, visual loss due to protesters retinopathy and tetany due to severe hypokalemia / fulminant pancreatitis. Fever is an important sign in patients with acute pancreatitis and is mediated by inflammatory cytokines in the first week. Fever in the second or third week is due to infection of the necrotic tissue and is much more significant. Patients with acute pancreatitis may be dyspnoeic due pleural effusion and may go into respiratory failure. The diagnostic markers (pancreatic enzymes such as amylase and lipase) and the risk factors that affect the clinical outcome are not well established by the previous clinical studies. However, we have reservations about any correlation of various diagnostic markers, including pancreatic enzymes and the clinical features, to the outcome of acute pancreatitis. Further, the recent development of radiological diagnostic instruments allows for a more accurate diagnosis and easier follow up. So in this study, we determined the correlation between the levels of pancreatic enzyme and the radiological severity of acute pancreatitis.

Materials and Methods

In this study 50 patients of Acute pancreatitis were included who were admitted in JLNMC, Bhagalpur, Bihar from a time period of October 2015 to September 2016. There were not any significant differences in term of age, sex etc. All patients met the inclusion and exclusion criteria before enrolling to the study. Pre-operative detailed history and thorough physical examination was done for all acute abdominal emergencies, to arrive at preoperative diagnosis. Diagnosis of acute pancreatitis was based on elevated serum amylase, lipase levels and/or radiological evidence by ultrasound or CT scan abdo-

men. Laboratory tests like serum amylase, lipase, haemogram, liver function tests, serum triglyceride, Blood Urea Nitrogen BUN, serum creatinine, blood glucose, lactate dehydrogenase, serum calcium, arterial blood gas analysis were done.

Results

Out of the 50 patients included, 35 were males and 15 were females. 80% of patients had pain predominantly in the epigastric region which was relieved in the majority by sitting forward with knees flexed against the chest. 49 patients had elevated serum amylase. 70% of patients had alcohol as the main etiological factor. USG was 70-90% sensitive in detecting Acute pancreatitis. The duration of hospital stay was 7-10 days. Complications were present in 25 out of 50 patients and pseudocyst was present in 6 of the patients.

Discussion

Acute pancreatitis is a common disease entity and its frequent occurrence with its serious complications have brought into issues regarding management. It is an inflammatory process of the pancreas with variable involvement of other regional tissues or remote organ systems. Severe acute pancreatitis is associated with organ failure with complications such as necrosis, abscess or pseudocyst. Pancreatic necrosis is a diffuse or focal areas of non-viable pancreatic parenchyma associated with peri-pancreatic necrosis and diagnosed by CECT. Pancreatic abscess is a circumscribed intra-abdominal collection of pus usually in or near pancreas containing little or no pancreatic necrosis arising as a consequence of acute pancreatitis. Acute pseudocyst is a collection of pancreatic juice enclosed by a wall of fibrous or granular tissue which arises as a consequence of acute pancreatitis, pancreatic necrosis or chronic pancreatitis. In studies by Garg PK, Khanna S, Bohidar NP and by Gislason H, Horn A, Hoem A, Imsland AK et al 7 the proportion of gallstone pancreatitis was highest followed by alcoholic pancreatitis. In this study abdominal pain was the presenting symptom in all the patients with acute pancreatitis. This correlates with a study conducted by Lee MG et al in which 30(86%) patients out of 35 cases had abdominal pain. In most of the countries, alcohol is the major etiological factor in the development of Acute Pancreatitis. In the present study alcohol consumption was present in 70% of cases of acute pancreatitis. This was correlating with Lee MG et al who reported that 77% of the patients in their study were chronic alcoholics. Similarly, in a study conducted by Montalto G et al 62% were alcoholics. The study conducted by Shaheen MA (2007) in 760 patients of acute pancreatitis, the percentage of alcoholics was only 53%. The sensitivity and specificity of ultrasonography and CT in patients with acute pancreatitis are in the range of about 80-90%. The present study revealed the evidence of pancreatitis by ultrasound in 70-90% patients.

Conclusion

It was shown in this study that the clinical findings were the same as in many studies. The biochemical analysis and radiological testings helps alot in detection of severity of the disease. Most of them had pain in the epigastric region. Alcohol is the major etiological factor in acute pancreatitis which is in accordance with the other studies. The present study revealed that USG was 70-90% sensitive in detecting acute pancreatitis.

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