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ASSESSMENT OF COMPLICATIONS ASSOCIATED WITH AN ACUTE PANCREATITIS INCIDENT

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Abstract

Background: The early detection of potentially serious acute pancreatitis makes it possible to select patients that will need to be treated more intensively and invasively than is necessary for mild pancreatitis.

Aim: This research targeted different complications linked to the acute attack and treatment of acute pancreatitis.

Material and Methods: The research group examined 100 consecutive patients admitted to tertiary care centres with a clinical, biochemical and radiological diagnosis of acute complication-related pancreatitis (Local/systemic).

Results: Ascites occurred in 46 patients in 100 patients with acute pancreatitis, pseudocyst in 22 patients, and hypovolemia in 20 patients.

Conclusion: For acute pancreatitis, several diagnostic and treatment options are available. However for proper initial treatment of the disease, assessment of the patient on presentation is crucial.

Keywords: Acute pancreatitis, ascites, pseudocyst.

Introduction

Acute pancreatitis has been known since ancient times, but it was only in the middle of the 19th century that the importance of the pancreas and the seriousness of its inflammatory disorders became understood. A wide variety of diseases ranging from parenchymal edema to extreme necrotizing pancreatitis are pathological acute pancreatitis. Hospital presentation ranges from moderate abdominal pain to hypotension, sepsis, fluid sequestration, multiple organ failure and death to metabolic derangement. Nine out of 10 have a mild to moderate course and self-limited experience, and 1 out of 10 have a life-threatening form of acute pancreatitis. Based on the above, moderate acute pancreatitis associated with limited organ dysfunction and uneventful recovery and severe acute organ failure-related pancreatitis and/or local complications, such as necrosis, abscess or pseudocyst, are currently defined. The failure to determine the seriousness of the disease at the onset is attributed to an elevated mortality rate associated with the disease. Various prognostic scoring systems involving multiple factors and single factors have been developed. The downside of the new severity scoring system is that it is slow and time-consuming and lacks sensitivity and precision. In reality, necessity has been called into question. Due to the change in the classification system, the lack of data in our country and the lack of consistency of the scoring system, it is currently very important to provide a more responsive, specific, severity scoring system that can predict the onset of the disease. This research targeted different complications linked to the acute attack and treatment of acute pancreatitis.

Material and Methods

The research group assessed 100 consecutive patients admitted to tertiary care centres with a clinical, biochemical and radiological diagnosis of acute complication-related pancreatitis (Local/systemic).

Inclusion Criteria: Acute abdominal pain associated with elevated serum lipase levels is present in patients. Patients present with severe abdominal pain associated with USG/CT scan-detected swollen pancreatic parenchyma and traumatic pancreatitis.

Exclusion Criteria: Patients include stomach pain consistent with vomiting and constipation. Hematuria, hematochezia, and jaundice are present in patients. Children younger than 15.

Results

The occurrence was higher in males in the 4th decade (38.6 percent of males) and in females in the 5th decade (42.9 percent of females). In our analysis, the mean age group is 38.6 years. 88 percent were male and 12 percent were female out of 100 patients. 7.33:1 is the male to female sex ratio. The symptom raised by almost all of the 100 patients was abdominal pain. Other clinical

characteristics include vomiting in 62 patients, followed by back pain in 36. In 100 acute pancreatitis patients, 46 patients develop ascites, 22 patients develop pseudocysts, 20 patients develop hypovolemia, 18 patients develop ascites and pleural effusion, 16 patients develop electrolyte imbalances, 14 patients develop pancreatic necrosis, and 10 patients develop septicemia.

Table 1: Distribution of patient characteristics

Characteristics	No. of patients	Percentage
Age group		
15-20	0	0
21-30	32	32
31-40	36	36
41-50	16	16
51-60	8	8
61-70	8	8
Sex		
Male	88	88
Female	12	12
Clinical Features		
Pain in abdomen	100	100
Vomiting	62	62
Back pain	36	36
Fever	18	18
Constipation	10	10

Table 2: Complications

Complications	No. of patients	Percentage
Ascites	46	46
Pseudocyst	22	22
Hypovolemia	20	20
Ascites + Plural Effusion	18	18
Electrolyte imbalance	16	16
Necrosis	14	14
Septicemia	10	10

Discussion

The early detection of potentially serious acute pancreatitis makes it possible to select patients that will need to be treated more intensively and invasively than is necessary for mild pancreatitis. Most complication-associated patients were managed in the general ward and few patients associated with septicemia and ARDS were expected. The laboratory tests performed in this study are plain, routine and readily accessible. Such study has been used to classify complications such as septicemia, electrolyte deficiency, hypovolemia, etc. A USG/CT scan was used to diagnose local complications. As the male is 7.33 times more active than the female in this research, it indicates that complications are often more frequent in males than in males, which is 7.33 times more.

Male sex incidence is higher in the Narendra N et al study (M:F=9:1). In the analysis of Bikramjit et al, the female sex ratio is 4.5:1. Owing to the increased incidence of alcoholic pancreatitis, the male sex incidence in the sample is higher. Compared to western countries, alcohol intake by women is very poor in India. With respect to clinical features, both patients had acute abdominal pain accompanied by vomiting. Patients in our study had acute abdominal pain associated with elevated serum lipase levels. In 7 patients who were associated with pancreatic necrosis, abscess and septicemia, TC was elevated by >20,000. Creatinine and urea in the blood increased in almost all patients. Typically, laboratory results reflect organ dysfunction and metabolic disturbances. The diagnosis of pancreatitis is known to be used for diagnosing acute pancreatitis, serum amylase, and lipase levels greater than three times the upper normal limit.

These enzymes are elevated in acute pancreatitis due to the leakage of the pancreatic acinar cell into the interstitial space and their subsequent absorption into the bloodstream. In our study, patients diagnosed with acute pancreatitis (increased serum lipase) were assessed with serum lipase, simple blood test, chest X-ray, to ascertain the associated complication. The diagnosis of erect abdominal X-rays was not very helpful, but it had the benefit of removing acute abdominal problems such as perforation and intestinal obstruction. In our research, USG abdomen was performed in all patients, but in most patients it was inconclusive at the time of admission because due to full bowel loops, the pancreas could not be visualized. USG has been effective in recognizing such local complications as pseudocysts.

But it had the added benefit of being non-invasive and could be replicated as necessary at regular intervals and even as a bed-side procedure. It was unreliable in the identification of pancreatic necrosis, but pancreatic edema, pancreatic fluid collection, gall stone, biliary sludge, ascites, and pseudo cyst could be localized. In this research, contrast-enhanced computed tomography (CECT) was a highly sensitive non-invasive diagnostic technique for pancreatitis and related complications. Pancreatic gland necrosis diagnosis, the assessment of the degree of necrosis, and the diagnosis of local complications are the most important tasks for CECT. With regard to treatment, all patients diagnosed with acute pancreatitis were clinically, laboratory and radiologically assessed. Patients were treated in the general ward and ICU according to complications and severity. In the general ward, 80 percent of patients with systemic complication

and 20 percent in ICU, those associated with septicemia and ARDS were treated.

For acute pancreatitis, several diagnostic and treatment options are available. However for proper initial treatment of the disease, assessment of the patient on presentation is crucial. Similarly, the pacing and evaluation of imaging would have a direct effect on the triage of patients.

Conclusion:

We performed an examination of 100 cases of acute pancreatitis. To assess their prognostic value, clinical and laboratory examinations were examined. Increased mortality was associated with hypotension, tachycardia, fever, and irregular lung findings. The degree of serum amylase elevation was not useful in prognostic terms. As evidenced by higher mortality rates, certain laboratory tests could be used to select more severe degrees of pancreatitis during the initial 48 hours. Those characteristics associated with an extremely poor prognosis were established. Early surgical intervention can support high-risk patients. Hospital and laboratory assessments (mainly numerical systems) and contrast-enhanced CT imaging are the basis for an objective assessment of the seriousness of acute pancreatitis. Today, numerical systems (APACHE II, Ranson) are widely used to help diagnose organ failure, and the obtained information is used with a sensitivity of about 70 percent as indirect proof of disease severity. To better predict clinical outcomes, the use of individual risk factors determined by laboratory tests (markers of pancreatic injury and markers of inflammatory response) has been suggested.

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