AN AUDIT OF THE MANAGEMENT OF ACUTE PANCREATITIS IN A GENERAL SURGICAL WARD

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ABSTRACT
Objective: To assess the results of the management of Acute Pancreatitis.
Setting: Surgical Ward-2, Jinnah Postgraduate Medical Centre, Karachi.
Patients: 62 patients with the diagnosis of Acute Pancreatitis.
Methodology: The demographic variables, cause and outcome of the cases were observed and recorded.
Results: Out of the total 62 patients, 37 had cholelithiasis; other causes were alcoholism, abdominal trauma, worms, instrumentation (ERCP) and drugs. All patients were classified according to APACHE-II scoring system into acute oedematous pancreatitis, severe acute pancreatitis and acute necrotizing pancreatitis. Forty eight patients developed complications including ARDS, anuria, hypotension, paralytic ileus and pseudocyst formation. Four cases died due to multiorgan failure.
Conclusion: Current recommended principles in the management of Acute Pancreatitis are based on identification of patients having severe disease and the group at risk for the development of complications. APACHE-II is a helpful scoring system and CT scan is an effective diagnostic tool in difficult cases.

KEY WORDS: Acute Pancreatitis, Scoring System, APACHE-II Scoring

INTRODUCTION
Acute pancreatitis is a potentially serious condition that carries an overall mortality of 10 to 15%1-3. However, there is a wide variation in its severity, ranging from a mild, self limiting condition to a severe and life threatening disease. The majority of patients who die from acute pancreatitis belong to the severe variety, which has a mortality rate approaching 40%1.

Acute pancreatitis is clinically characterized by abdominal pain, vomiting, fever and shock with elevated levels of pancreatic enzymes in the blood. The exact pathogenesis remains unclear but premature activation of pancreatic enzymes is the central event4. Common causes of acute pancreatitis include gall stone disease, alcoholism, viral infections and trauma, but it may be idiopathic also5.

Acute pancreatitis has been classified into acute oedematous pancreatitis, severe acute pancreatitis that presents with organ dysfunction that worsens in one week, and acute necrotizing pancreatitis6.

The severity of pancreatitis can be graded by different methods like Ranson’s criteria, Glasgow pancreatitis scoring and APACHE-II (acute physiology and chronic health evaluation) scoring system. This is the most commonly used system. A high APACHE-II score at the time of presentation is usually associated with increased morbidity and mortality. Its positive predictive value is 45-80%, the use of this scoring system combined with clinical judgment remains the corner stone in the management of patients7.

The status of the pancreas can be evaluated by computed tomography. The management of acute pancreatitis has been influenced by endoscopic retrograde cholangiopancreatography (ERCP), prophylactic antibiotics, parenteral
nutrition and surgery in selected cases\textsuperscript{1}. The established treatment of acute pancreatitis includes aggressive fluid resuscitation, oxygen supplementation and intensive care support of any failing organ or system\textsuperscript{1}.

Despite claims that early deaths are now a rarity since the improvement in the critical care, it is evident from the results of multicentre trials that in reality many patients with acute pancreatitis continue to die within the first week or later in the second or subsequent weeks. In either situation, the common mode of death is multi-organ dysfunction syndrome\textsuperscript{8}. This study aims to audit the results of acute pancreatitis admitted to a general surgical ward.

PATIENTS & METHODS

This is a retrospective descriptive study, which includes patients of acute pancreatitis admitted in Surgical Ward-2, JPMC Karachi over a period of three years viz. 1st Jan. 2003 to 31st Dec. 2005, according to the following criteria:

Inclusion Criteria:
- Patients of either sex above 14 years of age.
- Patients presenting with severe upper abdominal pain.
- Serum amylase level raised more than five times normal or serum lipase level twice than normal.

Exclusion Criteria:
- Patients with acute cholecystitis, acute intestinal obstruction, ischemic colitis, intestinal perforation or mesenteric infarction were excluded.

Patients were admitted from the Emergency Dept. after detailed history and clinical examination. APACHE-II scoring system was used for the evaluation of severity. Necessary investigations like serum amylase, arterial blood gases, serum urea, serum creatinine and electrolytes were carried out. Proforma of APACHE-II scoring system was filled on a daily basis.

Conservative management was instituted by keeping the patients nil per oral and starting I/V fluids and broad spectrum antibiotics capable of crossing pancreatic barrier. C.T scan was done in patients to establish the diagnosis and the assessment of severity.

RESULTS

A total of 62 patients were included in our study. There were 43 females and 19 males, giving a female to male ratio of about 3:1. Ages of the cases ranged from 15-65 years (mean-45 years), common age group being 20-35 years. Majority of cases did not have significant morbidity; 25 (40.1\%) patients had acute oedematous pancreatitis and 26 (41.9\%) severe acute pancreatitis, while 11 (17.74\%) patients suffered from acute necrotizing pancreatitis.

Cholelithiasis was the commonest cause found in 37 (59.6\%) cases, but in few patients worms and alcoholism proved to be the cause of acute pancreatitis (Table I). Mean APACHE-II score was found to be 8 (range 6-11). Three patients had APACHE-II score of <7, 37 had between 7-9 and 22 patients >9.

The most common systemic complication encountered was ARDS in 23 patients, seven had hypotension and three anuria. Local complications were ileus in 12 patients and pseudocyst formation in three cases.

DISCUSSION

Acute pancreatitis is an abdominal emergency with catastrophic complications that may occur locally as well as systemically. Despite recent advances in the medical field the mortality remains high\textsuperscript{4}.

The assessment of severity of acute pancreatitis is based on many scoring systems. APACHE-II is a fairly new scoring system with a positive predictive value of 45\%-88\%\textsuperscript{1}. An immediate advantage of the APACHE-II score over other systems is that patient can be stratified on admission\textsuperscript{9}. In the Leeds study APACHE-II score was

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<th>Table I. Aetiology of Acute Pancreatitis</th>
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<td>Gall stones</td>
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<tr>
<td>Idiopathic</td>
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<td>Post ERCP</td>
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<td>Alcoholism</td>
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<td>Abdominal trauma</td>
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more sensitive than immediate clinical assessment. In addition, the positive predictive value of an APACHE-II score of more than 9 was only 45%. By 48 hours, the sensitivity improved to 75% and positive predictive value to 70%, which was an improvement on clinical assessment and multiple factor scoring system.

We used the APACHE-II scoring system for the evaluation of severity and it was found to be appropriate and there is a definite correlation between the score of the patient at the time of presentation and the mortality. C.T scan is still the gold standard tool for diagnosis of pancreatitis in doubtful cases and for the assessment of local complications.

**CONCLUSION**

Over the past few decades there has been considerable re-evaluation in the management of severe acute pancreatitis. Current recommended principles in the management of severe acute pancreatitis are based on the identification of those patients having severe disease who are more likely to develop complications, and APACHE-II is one of the helpful scoring systems. The role of prophylactic antibiotics remains controversial but they have proved to be beneficial in severe disease. C.T scan is still an effective diagnostic tool.

**REFERENCES**


