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Descriptive Study of Factors Influencing Outcome in Acute Pancreatitis

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Abstract
Background : *Acute pancreatitis is one of the most important cause of abdominal pain. Its incidence varies from 5 to 80 per 100,000 population. Chronic alcoholism is the foremost cause of acute pancreatitis in men while biliary tract pathology is the commonest etiology in women. Various epidemiological studies have concluded that most cases of acute pancreatitis are attributable to chronic alcoholism.*
Aim :*1.To study the clinical presentation of acute pancreatitis with respect to age, sex and mode of presentation.*
2.To study the risk factors associated with acute pancreatitis.
3.To study the effectiveness of various treatment modalities for acute pancreatitis.
Material and Methods *: Patient data will be collected from all patients attending Govt. Royapettah Hospital General Surgery OPD, casualty and inpatient department, irrespective of their age /gender /background /socio economic status. These patients will be evaluated and followed up according to protocol.*
Results: *In our study it has been found that elderly patients are at a greater risk of mortality from acute pancreatitis. Alcohol related pancreatitis is usually less severe in its course. Morbidity in patients with pancreatitis remains high with 35% of patients developing complications.*
Conclusion: *Acute pancreatitis remains a dangerous disease although mortality rates seem to be falling in recent analysis of national statistics. Prophylactic antibiotic reduces the risk of infective complications but does not improve overall survival.*
Key words: *Acute pancreatitis, alcoholism, gall stones*

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I. Introduction

Acute pancreatitis is one of the most important cause of abdominal pain. Its incidence varies from 5 to 80 per 100,000 Population. Patients with acute pancreatitis usually get admitted to the surgical emergency units. Chronic alcoholism is the important cause of acute pancreatitis in men while biliary tract pathology is the commonest etiology in women. Various epidemiological studies have concluded that most cases of acute pancreatitis are attributable to chronic alcoholism. The incidence and the prevalence of pancreatitis are varying in different countries. Lankish et al. reported after twenty studies of acute pancreatitis in various countries of Europe, that the biliary tract disease contributes to the majority of cases of acute pancreatitis. The significant variability of data indicates that the accurate measurement of the magnitude of problem is very difficult for the researchers. This is because of the following factors.

1) Lack of standardization in diagnosing acute pancreatitis with laboratory and clinical parameters.
2) Variation in the inclusion and exclusion criteria's in different studies.
3) Variation with regards to tools used for measuring consumption of alcohol.
4) Confusion between acute and chronic forms of pancreatitis.

The fact is that the incidence of alcohol induced pancreatitis is increasing over the past decade. A study in United Kingdom shows alcoholic pancreatitis incidence has increased from 14.5/lakh population during 1989-1990 to 20.7/lakh population in the year 1999-2002. Clinically acute pancreatitis occurs in 5 percent of persons with high alcohol consumption.

About 3-8 % patients with symptomatic biliary calculus can develop acute pancreatitis. The relative risk of developing acute pancreatitis in patients with biliary stones is 35 times higher than the normal population. Biliary stone pancreatitis commonly occurs in women and in the elderly.

The development of acute pancreatitis in patients with biliary calculus is related to the stone size and its number. Patient can develop acute pancreatitis even with small multiple gall stones. It indicates migration of gall stones into the common bile duct. High level of mucin in bile of patients with acute pancreatitis,

revealed that mucin enhances stone formation. In a study of 528 patients with biliary stones acute pancreatitis was more prevalent in patients with multiple small stones than large single stone. Some study have indicated that about 80 % of idiopathic pancreatitis were due to biliary stones.

Most of the patients with acute pancreatitis had only milder form of the ailment, which can be managed conservatively and the patients recovered completely. The severe form of pancreatitis occurred in 15% of patients. In recent studies the mortality rate has been greatly reduced from 35- 85% to 10- 20%. Severe acute pancreatitis can present with two stages of the disease. Initial inflammation and necrotic changes of the parenchyma of pancreas that is followed by signs of systemic inflammatory response syndrome leading on to multi organ failure within 7-10 days. About half of patients with severe forms of pancreatitis died w i t h in the first week due to complications like ARDS/MODS. The mortality rate in patients with MODS varies from 30% to 100%. These patients need early resuscitation, intensive care to prevent multi organ/respiratory failure. Some patients need surgical interventions like retroperitoneal drainage and necrosectomy in pancreatic necrosis and infected necrosis. To conclude the purpose of my study is to diagnose, assess the severity, management and outcome in patients with acute pancreatitis with clinical manifestations, labaratory investigations and imaging studies in our institution.

II. Aim Of Study

1.To study the clinical presentation of acute pancreatitis with respect to age , sex and mode of presentations.
2. To study the risk factors associated with acute pancreatitis.
3. To study the effectiveness of various treatment modalities for acute pancreatitis.

III. Methodology

SOURCE OF STUDY :
All patients with acute pancreatitis presenting to the General surgery OPD or casualty of Govt. Royapettah Hospital, referred from medical wards of Govt. Royapettah Hospital or referred from outside after diagnosing acute pancreatitis.
DURATION OF STUDY - 10 months (DEC 2015 to SEP 2016)

PLACE OF STUDY
Department of General Surgery in Govt. Royapettah Hospital and Kilpauk Medical College Hospital.

MATERIALS AND METHODS:
Patient data will be collected from all patients attending Govt. Royapettah Hospital - General Surgery OPD, casualty and inpatient department, irrespective of their age/gender/ background /socio economic status. These patients will be evaluated and followed up according to protocol.
Detailed history of patient will be entered in proforma.
Complete haemogram , LFT, prothrombin time, serum amylase, serum lipase will be done for all patients.
Preliminary ultrasound of abdomen and pelvis will be done on the same day of presentation.
Patient will be put on conservative line of management.
Patients will be followed up daily based on clinical parameters. LFT and USG Abdomen will be repeated every 3rd day if patient is symptomatically not relieved.
Repeat Ultrasound / CT /MRI Abdomen & pelvis will be done immediately if patients condition does not improve/worsens or after 3-4 days as a routine prognostic factor.
If the patient develops any of the complications like hemorrhagic pancreatitis or pancreatic necrosis, they will be immediately taken up for surgery.
Patient will be informed about any surgical procedure and consent will be obtained.

TYPE OF STUDY
DESCRIPTIVE STUDY
SAMPLE SIZE
50 patients
INCLUSION CRITERIA:
1.All cases of acute pancreatitis diagnosed clinically and/or ultrasonographically.
2.All cases acute pancreatitis with complications like necrosis, haemorrhagic pancreatitis.
3.All cases of diagnosed acute pancreatitis being referred to Govt. Royapettah hospital.

EXCLUSION CRITERIA: Chronic pancreatitis.

IV. Results

Of 50 patients with acute pancreatitis, 46 were admitted directly to the Department of General Surgery and 4 were transferred from other departments for treatment of local/systemic complications. The age range was 11 to 92 years with a median age of 53 in the direct admission group and 56 in transferred patients.

Men predominated in a ratio of 9: 1.

Incidence of acute pancreatitis was found to be more in the middle age group between 30 to 60 years, with a decrease in both in the younger age group and geriatric age group. All patients with acute pancreatitis had abdominal pain (100%) with vomiting being present in 72%. Other presenting symptoms being abdominal distension, fever, shock and ascites.
Most patients had milder form of the disease (36 of 50 cases; 72%) with no organ failure (34 of 50 cases; 68%) but transferred patients more often had severe disease than those admitted directly.
The etiological factors identified alcohol or gall stones were responsible for 90% of acute pancreatitis while 4% had no identifiable etiology.
Pancreatitis due to alcohol related disease was less severe disease than patients with gall stone pancreatitis.

Fifteen patients (30%) required one or more surgical or interventional radiological procedures during their index hospital admission.

Of the five patients undergoing necrosectomy, one person required further necrosectomy.

V. Discussion

Acute pancreatitis remains a dangerous disease although death rates seem to be falling in recent analysis of national statistics.

These trends may not be reflected in data from individual surgical units which receive a high proportion of patients with complicated and severe disease.

The death rate in this review of 8% for the 50 patients admitted directly to our surgical unit must be set against the overall death rate of 6.1% from other published series.

In our study it has been found that elderly are at greater risk from acute pancreatitis.

Acute pancreatitis of unknown etiology is also associated with an increased mortality.
Another high risk group were patients with ERCP induced pancreatitis

Renal failure in patients was an early event and it is clear that great care must be exercised in fluid balance and in the use of potentially nephrotoxic agents such as non-steroidal anti-inflammatory drugs and intravenous contrast media.

Alcohol related pancreatitis proved to be usually less severe in its course.

Organ dysfunction occurs in about one in four of patients with acute pancreatitis.
Spectrum of organ dysfunction exists like measurable hypoxia, hypotension and renal insufficiency.

The group of patients with pancreatitis with pancreatic and peripancreatic necrosis place the greatest load on both staff and resources.
Timing of necrosectomy can be difficult but is based clinically by providing evidence of severe disease (sepsis or multiple organ failure), which fails to improve in spite of maximum intensive treatment and on computed tomography based determination of location and extent of the necrosis.

Early surgery carries a risk of significant hemorrhage from the pancreatic bed that is difficult to control, given that endarteritis obliterans is incomplete and that the delineation between viable and nonviable tissue may not be clear cut.

Bacterial contamination of necrosis is considered to be a serious event. It occurs in about 40-70% of patients with severe pancreatitis and is generally associated with increased mortality.

Patients with severe acute pancreatitis generally require nutritional support in the form of total parenteral nutrition because of duodenal ileus and a need for promoting pancreatic 'rest'.

Morbidity in patients with pancreatitis remains high with 35% of our patients developing complications. Local pancreatic complications were seen in about 19% of the patients admitted to the unit.

Catheter sepsis was a significant source of morbidity in this study.

Infective complications in the region of the pancreas and at distant site were the commonest indications for therapeutic intervention.

Prophylactic antibiotic reduces the risk of infective complications and to reduce the rate of infection in pancreatic necrosis but overall survival was not improved.

VI. VTables & Figures

FIGURE 1 :AGE DISTRIBUTION OF PATIENTS WITH ACUTE PANCREATITIS

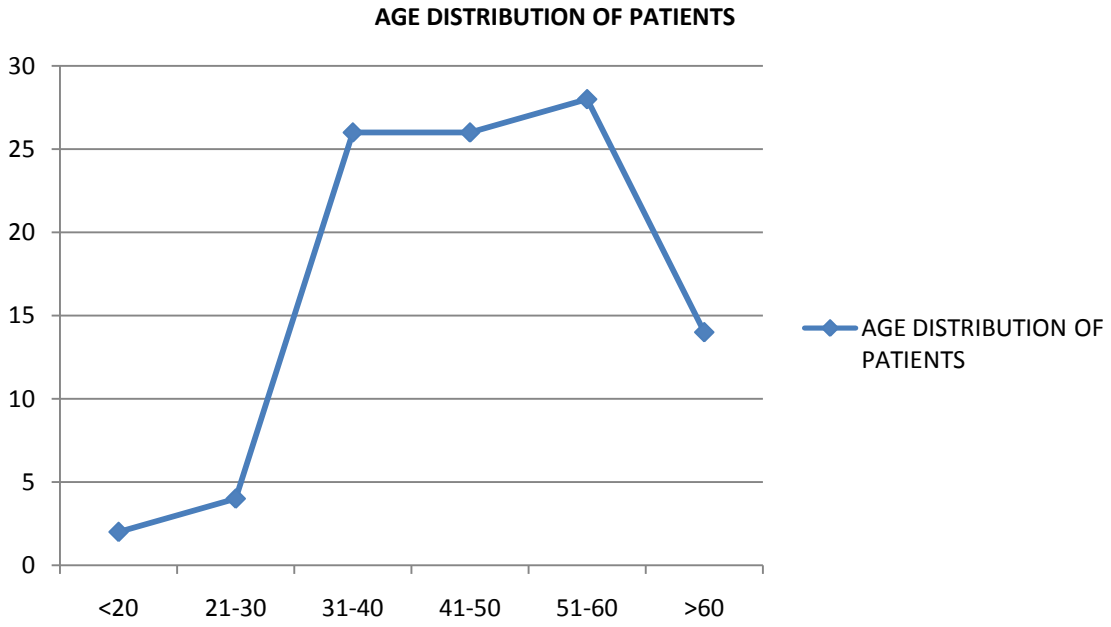

TABLE 1 – CLINICAL MANIFESTATION OF ACUTE PANCREATITIS AT PRESENTATION

S.NO	CLINICAL	PERCENTAGE
1.	Abdominal Pain	100
2.	Vomiting	72
3.	Shock	6
4.	Ascites	12
5.	Abdominal distention	40
6.	Fever	16

TABLE 2 – AETIOLOGY OF ACUTE PANCREATITIS

S.NO	AETIOLOGY	NO OF PATIENTS	PERCENTAGE
1	Alcoholism	36	72%
2	Gall stones	9	18%
3	Post operative	2	4%
4	Idiopathic	2	4%
5	Trauma	1	2%

TABLE 3 – PERCENTAGE OF ACUTE PANCREATITIS PATIENTS DEVOLOPING COMPLICATIONS

S.NO	COMPLICATIONS	NO OF PATIENTS (%)
1	Pancreatic pseudocyst	7(14)
2	Pancreatic necrosis	5(10)
3	Urinary tract infection	10(20)
4	Chest infection	9(18)

VII. Conclusion

Acute pancreatitis remains a dangerous disease although death rate seems to be falling in recent analysis of national statistics. Alcohol use was found to be the most common cause of acute pancreatitis but the course of illness was less severe. Morbidity in patients with pancreatitis remains high with patients developing complications. Timing of necrosectomy can be difficult but is based clinically with evidence of worsening of severe pancreatitis. Early surgery carries a risk of significant hemorrhage from the pancreatic bed that is difficult to control. Timing of necrosectomy can be difficult but is based clinically by providing evidence of severe disease. Acute pancreatitis of unknown etiology is also associated with an increased mortality. Bacterial contamination of necrosis is considered to be a serious event. Patients with severe acute pancreatitis generally require nutritional support in the form of total parenteral nutrition. Prophylactic antibiotic reduces the risk of infective complications but does not improve mortality rates.

References

[1]. Wilson C, Imrie CW. Changing patterns of incidence and mortality from acute pancreatitis in Scotland, 1961-1985. BrJtSurg 1990; 77: 731-4.
[2]. Fan ST, Choi TK, Lai CS, Wong J. Influence0 of age on the mortality from acute pancreatitis. Br J Surg 1988; 75: 463-6.
[3]. Lankish P., Burchard0, Pflithofer D., Lehnick D., - acute pancreatitis : which patient is more at risk ? pancreas 1999b : 19 : 321-324. Widdison AL, Karanjia ND. Pancreatic infection0 complicating acute pancreatitis. BrJ Surg 1993; 80: 148-54.
[4]. Femandez-del Castillo C, Rattner DW, Warshaw AL. Acute pancreatitis. Lancet 1993; 342: 475-9.
[5]. Beger HG, Bittner R, Block S, Buchler M. Bacterial contamination of pancreatic necrosis. Gastroenterology 1986; 91: 433-8.
[6]. Fan ST, Choi TK, Lai CS, Wong J. Influence0 of age on the mortality from acute pancreatitis. Br J Surg 1988; 75: 463-6.
[7]. Bank S, Wise L, Gersten M. Risk factors in acute pancreatitis. AmJ. Gastroenterol 1983; 78: 637-40.
[8]. Paricio AP, Olmo DG, Franco EP, Gonzalez AP, Gonzalez LC, L6pez JB. Gallbladder cholesterolosis: an0 aetiological factor in acute pancreatitis of uncertain origin. Br _7 Surg 1990; 77: 735-6.
[9]. Lee SP, Nicholls JF, Park HZ. Biliary sludge as a cause of acute pancreatitis. NEnglJfMed 1992; 326: 589-93.
[10]. Susan Standring PhD DSc. The 39th edition of Gray's Anatomy ; 88 pancreas: spleen and suprarenal0 and spleen
[11]. Michael J. Zinner, MD, FACS. Maingot's Abdominal Operations 11TH edition. Chapter 36; Management of Acute Pancreatitis

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