

Changing Etiological Incidence of Acute Pancreatitis in Adults- Single Tertiary Centre Study.

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Abstract

Background: Acute pancreatitis is an inflammatory disease of pancreas having mild self limiting course of illness in 80% to mortality upto 20% of cases. In developed countries, most common causes of acute pancreatitis are common bile duct stones in 38% and alcohol abuse in 36% of cases.

Objective: To study the etiological incidence of acute pancreatitis in adults in tertiary care centre.

Methods: A cross-sectional study was conducted on hundred patients who were admitted with the features of acute pancreatitis in different surgical wards. The diagnosis was made on the basis of detailed history, physical examination, serum amylase and lipase levels and other required investigations.

Result: The commonest factor responsible for acute pancreatitis was found to be alcoholism (58% cases) followed by biliary calculi (32% cases). It was more commonly found in males (62%), in between 30-39 years of age group (35%) and in low socio-economic group (62%) of patients.

Conclusion: Acute pancreatitis is common among middle aged males of low socio-economic group. Alcoholism is the most common etiological factor.

Keywords: Acute pancreatitis, alcoholism, biliary calculi, serum amylase.

I. Introduction

Acute pancreatitis is an inflammatory disease of pancreas with a wide spectrum of symptoms ranging from mild self limiting course of illness without serious complications in 80% of patients to a substantial mortality upto 20% of Patients^[1]. It has a wide range of etiological factors, approximately 80% cases are associated with biliary calculi or sustained alcohol abuse; the relative frequency of these two factors depends on the prevalence of alcoholism in the population studied^[2]. In developed countries, most frequent causes of acute pancreatitis are stones in common bile duct in 38% and alcohol abuse in 36% of cases^[3,4]. Gallstone pancreatitis is seen more frequently in women between 50-70 years of age, whereas alcohol-induced pancreatitis is more prevalent in young men between 30-45 years of age^[5]. Aim of this study was to find out the etiology of acute pancreatitis exclusively in adult patients admitted with the symptoms and signs of acute pancreatitis in the department of surgery at Rajendra Institute of medical sciences, Ranchi.

Material And Methods

This was a cross-sectional study, conducted during the period of November 2014 to October 2016, at Rajendra Institute of Medical Sciences, Ranchi. One hundred patients with the features of acute pancreatitis were selected for the study. Written consent taken from all the patients selected for study. The diagnosis was made on the basis of detailed history, physical examinations, serum amylase and lipase levels, trans-abdominal ultrasonography, CECT of abdomen, MRCP and other required investigations. Conservative approach of treatment was taken and all patients who were treated successfully were followed -up on out-patient basis for the period of four weeks for any complication.

II. Results

Out of the 100 patients taken for study, 62 were male (62%) and 38 were female (38%). The maximum incidence of acute pancreatitis was found in between 30-39 years of age, i.e 45 patients (45%) and in low income group, i.e 62 patients (62%). The commonest factor responsible for acute pancreatitis was alcoholism in 58 patients (58%) followed by biliary calculi in 32 patients (32%). The most common presenting complaints with acute pancreatitis were epigastric pain and nausea/repeated vomiting/retching in all 100 patients (100%). Hiccough was found in 20 patients (20%). Among clinical signs, guarding over epigastrium and tachycardia were found in all patients (100%). Elevated levels of serum amylase and lipase more than three times were found in 95 patients (95%), and levels less than three times but above normal range were found in 5 patients (5%).

In our study 86% of cases were managed conservatively without any complication, early operative intervention in 2% cases for pancreatic necrosis, 8% cases develop pseudocysts, out of which 4% cases resolved spontaneously within six weeks period, late operative interventions needed in 4% cases of non-resolved pseudocysts and there was 4% mortality.

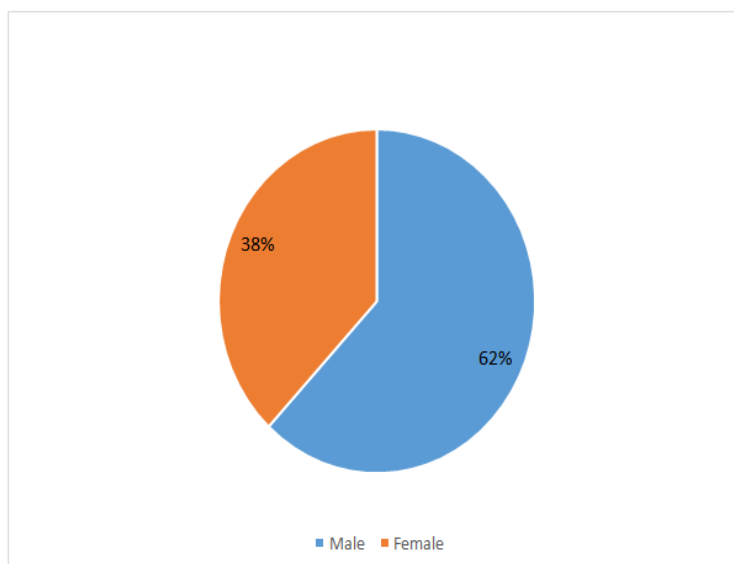


Fig. 1: Gender distribution

Table 1: Age distribution

Age group(in years)	No. of patients	Percentage
20-29	20	20
30-39	45	45
40-49	25	25
50-59	8	8
60 and above	2	2

Table 2: Socio-economic status

Group	No. Of patients	Percentage
Low	62	62
Middle	28	28
High	10	10

Table 3: Etiological Factors

Factors	No. of patients	Percentage
Biliary calculi	32	32
Alcoholism	58	58
Abdominal trauma	6	6
Pancreatic duct calculi	2	2
Periapulmonary carcinoma	2	2

Table 4: Frequency of symptoms and signs of acute pancreatitis

Symptoms	Frequency	Percentage
Epigastric pain	100	100
Nausea/repeated vomiting/retching	100	100
Hiccoughs	20	20
Signs		
Tachycardia	100	100
Tachypnea	80	80
Hypotension	90	90
Guarding over epigastrium	100	100
Distension of abdomen	70	70
Pleural effusion	30	30

III. Discussion

Acute pancreatitis, an inflammatory disease of pancreas, having mild self-limiting course without any serious complications in 80% to a mortality up to 20% of patients^[1]. Among etiological factors, biliary tract stones or substantial alcohol abuse are associated with up to 80% of cases, the relative frequency depends on the prevalence of alcoholism in the population^[2]. Stones in common bile duct account for 38% and alcohol abuse for 36% of cases in developed countries^[3,4]. In our study, the commonest etiological factor for acute pancreatitis is alcoholism (58%) followed by biliary tract stone (32%). This is because of high prevalence alcoholism mostly of crude home made

alcohol called Hadia(having some ritual importance also) among low socio-economic group of population in this region of India consists of Jharkhand and neighbour districts of West Bengal,Odisha and Chhattisgarh.

Alcohol induced pancreatitis is more common among men^[5].In our study also men (62%) are most commonly affected.The median age of onset of alcohol induced acute pancreatitis is in between third and fourth decades^[5].In our study the maximum age incidence is in between 30-39 years(45%). A three fold or higher level of serum amylase and lipase confirms the diagnosis^[6].In our study,95% of patients have three fold or higher serum level of amylase and lipase.CECT is currently the best diagnostic method for pancreatic necrosis^[7].In our study CECT has been done in all patients to exclude pancreatic necrosis in early stage.CT severity index has a good correlation with mortality and morbidity^[8].Most episodes of acute pancreatitis(80%) are mild and self limiting^[9].Organ failure and infection of pancreatic necrosis are important determinants of mortality in patients with acute pancreatitis and the presence of either indicates severe disease^[10].In our study 86% of cases were managed conservatively without any complication,early operative intervention for infection of pancreatic necrosis in 2%,late operative intervention for pseudocyst in 4% and mortality in 4% of cases.

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