



ORIGINAL RESEARCH PAPER

Surgery

A STUDY ON AETIOLOGICAL EVALUATION OF ACUTE PANCREATITIS IN THE SOUTHERN PART OF ODISHA

KEY WORDS: acute pancreatitis, alcohol, gall stone

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ABSTRACT

The incidence of acute pancreatitis has increased during last decade. The two major causes being biliary calculi (50–70 percent) of patients and alcohol (25 per cent) of cases (world wide)

AIM

To highlight the significance of alcohol as number one aetiological factor of acute pancreatitis in south Odisha.

MATERIALS AND METHODS

Patients admitted with acute pancreatitis to this hospital were taken up for the study. 60 cases were studied from June 2015 to May 2017. The data regarding aetiology were analysed.

RESULTS AND CONCLUSIONS

Out of 60 patients, 54 were male and 06 were female. The mean age of the patients was 33 years. The causes of pancreatitis were as follows: 48 (80%) due to alcoholism, 03 (5%) due to gallstones, 09 (15%) due to idiopathic causes. Alcohol consumption is being the most common cause of acute pancreatitis in the southern part of Odisha.

INTRODUCTION

Acute Pancreatitis is inflammation of the gland parenchyma of the pancreas. The underlying mechanism of injury in pancreatitis is thought to be premature activation of pancreatic enzymes within the pancreas, leading to a process of autodigestion¹. Risk factors and the aetiology of the disease influence the outcome of patients with Acute Pancreatitis. Consequently, establishing the aetiology of Acute Pancreatitis is important for its management and secondary prevention. In the UK and Southern Europe, biliary disease is most common, whereas alcohol consumption is dominant in the US and Northern Europe^{2,3}. Gallstones and ethanol abuse account for 70% to 80% of Acute Pancreatitis cases. Gallstone pancreatitis is the most common cause of AP in the West. It accounts for 40% of U.S. cases. The overall incidence of Acute Pancreatitis in patients with symptomatic gallstone disease is 3% to 8%. It is seen more frequently in women between 50 and 70 years of age. Excessive ethanol consumption is the second most common cause of Acute Pancreatitis worldwide. It accounts for 35% of cases and is more prevalent in young men (30 to 45 years of age) than in women. However, only 5% to 10% of patients who drink alcohol develop Acute Pancreatitis. Factors that contribute to ethanol-induced pancreatitis include heavy ethanol abuse (>100 g/day for at least 5 years), smoking, and genetic predisposition. As compared with nonsmokers, the relative risk of alcohol-induced pancreatitis in smokers is 4.9. Alcohol has a number of deleterious effects in the pancreas. It triggers proinflammatory pathways such as nuclear factor B (NF- B), which increase the production of TNF- and IL-1. It also increases the expression and activity of caspases. Caspases are proteases that mediate apoptosis. In addition, alcohol decreases pancreatic perfusion, induces sphincter of Oddi spasm, and obstructs pancreatic ducts through the precipitation of proteins inside the ducts⁴. Alcohol abuse is the most common cause of pancreatitis in western countries. The natural history of alcoholic pancreatitis is characterised by recurrent episodes of pancreatitis in the early stages and by progressive pancreatic dysfunction, often associated with calcification, in the late stages^{5,6,7}.

The present study to highlight the significance of alcohol as number one aetiological factor of acute pancreatitis in southern part of Odisha.

MATERIALS AND METHODS:

Patients admitted with acute pancreatitis to the department of general surgery, M.K.C.G Medical College and Hospital, Berhampur were taken up for the study. Totally 60 patients were studied from June 2015 to May 2017. The diagnosis was ascertained by clinical assessment, investigation like serum amylase, lipase and imaging techniques (USG/CECT) and repeated subsequently when needed. All patients were followed up with repeat USG/CECT and The data regarding aetiology in acute

pancreatitis were analysed.

RESULTS:

There were 60 patients of diagnosed acute pancreatitis out of which 54 were male and 06 were female. The mean age of the patients was 33 years. The aetiology of pancreatitis were as follows: 48 (80%) due to alcoholism, 03 (5%) due to gallstones, 09 (15%) due to idiopathic causes.

1. AETIOLOGY

In our study alcoholism was the main etiological factor among male and accounting for 88.1% of the cases. 1.85% of patients had gall stone disease and idiopathic in 9.25% cases among male patients. In this study cause was unknown among the female patient which accounting for 66.6% of cases. 33.3% of cases found to be gall stone disease.

Aetiology	No. of patients (male)	Percent ages	No. of patients (female)	Percent ages	Total	Percentage
Alcohol	48	88.8%	00	00	48	80%
Gall stone	01	1.85%	02	33.3%	03	05%
Idiopathic	05	9.25%	04	66.6%	09	15%

Table: 1(aetiology)

2. DURATION OF ALCOHOLISM AMONG MALE PATIENT

In our study 83.3% cases were found to consume alcohol for a duration of 10-20 year. 7.40% patient was consume alcohol for 5-10 year duration and also 7.40% patient for >20 year duration. There was 1.85% cases were consume alcohol for <5 year duration.

DURATION	NO OF PATIENTS	PERCENTAGES
<5yr	01	1.85%
5-10yr	04	7.40%
10-20yr	45	83.3%
>20yr	04	7.40%

Table: 2(duration of alcoholism)

3. AGE OF PRESENTATION

The peak incidence was in the 4th decade in male (51.8%) and 4th decade in female (66.6%). The mean age group in our study is 33 years. The highest incidence was noted in the age group of 31-40 years, accounting for 53.3% of patients.

Age Group in years	MALE(54)		FEMALE(06)		Total (60)	
	No	%	No	%	No	%

10-20	04	7.40	00	00	04	6.66
21-30	12	22.2	01	16.6	13	21.6
31-40	28	51.8	04	66.6	32	53.3
41-50	08	14.8	01	16.6	09	15.0
51-60	02	3.70	00	00	02	3.33

Table:3(age group)

DISCUSSION

Acute pancreatitis is a frequently occurring disease entity. In this study etiological evaluation of acute pancreatitis was done and relevant investigation was done.

1. AETIOLOGY

Alcohol was the main aetiological factor in our study and present in about 80% of patients. This was comparable to the study by rajshekar patil et al 8 and sand J et al9. In other studies gall stone was the main aetiological factor. The percentages of idiopathic cases was comparable.

Aetiology	Buchler MW et al. ¹⁰	Pupelis G Et al. ¹¹	Sand J et al.	Choudhuri G et al ¹²	Rajshekar Patil et al	Present study
Alcohol(%)	33	54	70	45.83	84.6	80
Gall stone(%)	45	19	20	26.04	6.1	5
Idiopathic(%)	22	27	10	19.37	6.1	15

Table:4 (comparison of aetiology)

2. AGE OF PRESENTATION

The mean age of presentation in our study was 33% and is comparable to the study by Kashid A et al¹³.

Mean age	Kashid A et al.	Choudhuri G et al.	Pupelis G et al.	Rajshekar Patil et al	Present study
Mean age in year	35	44.89	47	36.58	33

Table:5 (comparison of mean age of presentation)

3. SEX

There was a male predominance in our study with male accounting for 90% of the patients with the M:F ratio 9:1. out of 60 patients 54 were male and 6 were female. The other study also had a male predominance. This could be the alcohol which was the main etiological agent in the southern part of Odisha.

sex	Kashid A et al.	Choudhuri G et al.	Pupelis G et al.	Rajshekar Patil et al	Present study
Male(%)	70.91	66.6	73.7	92.3	90
Female(%)	29.09	33.4	26.3	7.69	10

Table:6 (comparison of sex)

CONCLUSION:

The purpose of this study was to know the aetiology of acute pancreatitis in our hospital. Most of the patients admitted in emergency with the pain abdomen. The findings of this study were compared with those available in literature. The results have been represented with tables for better understanding. In this study alcohol being the most common aetiology in southern part of Odisha and there was a male predominance.

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