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PATTERN OF ACUTE PANCREATITIS IN A TERTIARY CARE HOSPITAL OF JAMMU- A RETROSPECTIVE ANALYSIS.

General Medicine

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ABSTRACT

INTRODUCTION-Acute pancreatitis is an inflammatory process that occurs acutely in the pancreatic tissue. It is believed to occur as a result of intra-pancreatic activation and auto-digestion of the pancreases by the pancreatic enzymes.

OBJECTIVE: To describe the epidemiology of acute pancreatitis in a tertiary care center of Jammu. Materials and Methods: A retrospective study was conducted which evaluated all adults (>15 yrs) who presented with first attack of acute pancreatitis to GMC Jammu from 1st of January 2016 to 31st of December 2017.

RESULTS: 780 patients were taken. The mean age of the patients was 44 ± 11 years. 72.8% (n=568) were males and 27.2% (n=212) were females. Majority of the cases were moderate (n=480) compared to mild (n=96) and severe (n=44) depending on CT severity index. 41.8% (n=326) of the cases were secondary to alcohol followed by biliary tract disease in 25 %(n=195). 208 patients (26.7%) had complications, with pseudocyst as a commonest complication (7.2%).

CONCLUSION: Pancreatitis occurred in males more than females. Alcoholic pancreatitis was more common in males, whereas biliary pancreatitis was more common in females. Alcoholic pancreatitis re-occurred in nearly half of the cases. Severe cases were associated with more complications and recurrence.

KEYWORDS

Acute Pancreatitis, CT Severity index, Amylase, Alcoholic pancreatitis, Pseudocyst.

INTRODUCTION

Acute pancreatitis is an inflammatory process that occurs acutely in the pancreatic tissue. It is believed to occur as a result of intra-pancreatic activation and auto-digestion of the pancreases by the pancreatic enzymes. (1, 2)Although the majority of these attacks are mild, where the patient recovers within seven days, about 20% are severe and can end up with severe consequences.(3)

Hence, we assessed the pattern of acute pancreatitis in a tertiary care center of Jammu division.

METHODS

This is a retrospective study, which was conducted from January 1, 2016 until December 31, 2017 at GMC Jammu. The medical record of all the patients who presented with acute pancreatitis in Medicine department was obtained. Inclusion criteria consisted of the diagnosis of acute pancreatitis, which was based on clinical features and an elevated serum amylase level of more than 300 or an elevated serum lipase more than 2-3 times from baseline. Exclusion criteria comprised of the age <15yrs, chronic pancreatitis, cirrhosis and patient with cystic fibrosis. Demographic data on age and sex were obtained. The clinical progress and biochemical data during the course of the attack were studied together with the management and outcome. Laboratory data were analyzed in relation to the severity of the acute occurrence according to Ranson's criteria and CT severity index.(4,5)The occurrence was considered severe in three or more of the parameters were presented during the first 48 hours of admission and on the basis of CT severity index. Descriptive statistics were used to describe the data.

RESULTS

The total number of patients with acute pancreatitis during the study period was 780 (568 of them were males (72.8%) and 212 were females (27.2%). The age ranged between 15-80 years with the mean age of 44 yrs. The most common age group involved was 36 to 65 years. (As shown in Table 1 & 2).

The etiology of acute pancreatitis in 41.8% of the cases was secondary to alcohol followed by biliary tree disease (25%). Whereas it was unknown in 20.1% of the cases, and the remaining were secondary to: hyperlipidemia (5.9%), drugs (azathioprine, HAART)(1.5%), hypercalcemia(0.3%), post ERCP(0.8%), viral (0.5%).It is important to mention that despite the variety in the causes of acute pancreatitis, this didn't influence the severity of the disease. (Table 3)

Among 780 patients, 620 patients were subjected to CECT Abdomen .Most of patients were having moderate pancreatitis (61.5%) based on CT severity index. (Table 4)

208 cases (26.7%) had complications, with pseudocyst as commonest complication (7.2%) (Table 5). There were 18 (2.3%) deaths among 780 patients secondary to acute pancreatitis in our study. (Table 6).

Table 1 Age Distribution

Age in Yrs	Number Of Patients (N)	Percentage(%)
15-25	80	10.3
26-35	106	13.6
36-45	138	17.7
46-55	184	23.6
56-65	186	23.8
>65 yrs	86	11
Total	780	100

Table 2 Sex Distribution

Sex	Number Of Patients (N)	Percentage(%)
Male	568	72.8
Female	212	27.2
Total	780	100

Table 3 Causes of Acute Pancreatitis

Cause	Number Of Patients (N)	Percentage (%)
Alcohol	326	41.8
Hyperlipidemia	46	5.9
Post ERCP	6	0.8
Viral	4	0.5
Poisoning	6	0.8
Drugs	12	1.5
Biliary Tract Disease	195	25
Anatomical Abnormalities of Pancreas	26	3.3
Idiopathic	157	20.1
Hypercalcemia	2	0.3
Total	780	100

Table 4 CT severity Index of Patients

Grade	Number Of Patients (N)	Percentage(%)
0-3 (Mild)	96	12.4
4-6(Moderate)	480	61.5
7-10(Severe)	44	5.6
CT not Done	160	20.5
Total	780	100

Table 5 Complications of Pattern

Complications	Number Of Patients (N)	Percentage (%)
Hypocalcemia	42	5.4
ARDS	6	0.8
Acute Renal Failure	32	4.1
Pleural Effusion	26	3.3
Hypercalcemia	23	2.9
DIC	3	0.4
Pancreatic Abscess	8	1
Pancreatic Pseudocyst	56	7.2
Splenic Vein Thrombosis	2	0.3
No Complications	572	73.3
Total	780	100

Table 6 Mortality pattern

Attribute	Number Of Patients (N)	Percentage(%)
Survivals	762	97.7
Non- Survivals	18	2.3
Total	780	100

DISCUSSION

Acute pancreatitis is a common disease and constitutes a great medical problem in western society with morbidity of 20-30% and mortality of 8-20%.(6,7,8).In the present report, it was found that acute pancreatitis is more common in males than females and can affect all ages, which was also reported in other studies.(9,10) Alcohol and biliary tree disease constituted the most common causes of acute pancreatitis, whereas in 20.1% of the cases the cause was unknown. These findings are consistent with other reports from the western countries.(11,12)We also found that alcohol was the main cause in men, while biliary tree disease was the main cause in females. It is well known that hormonal influence, especially estrogen, plays an important part in gallstones formation in females, hence increases the risk for pancreatitis.(13) Then, it was inspected on whether gender had any role in the severity of the disease, but there was no significant difference with p value >0.050 and this is similar to a previous study published by Lankisch PG etl.(9)

In addition, causes of acute pancreatitis didn't influence the severity of the disease. The later relationship was not fully explored or investigated in previous studies. As per the revised Atlanta classification of acute pancreatitis,(14) acute pancreatitis was defined clinically when at least 2 out of 3 features are encountered: (a) abdominal pain suggestive of pancreatitis (pain in the epigastric area which often radiates to the back), with the beginning of such pain considered to be the onset of acute pancreatitis; (b) level of serum lipase and amylase are three or more times than the normal range, (c) findings on computer tomography (CT), magnetic resonance (MR) imaging, or transabdominal ultransonographic (US) studies, which are characteristic of acute pancreatitis. There is no need for contrast material–enhanced CT if acute pancreatitis' diagnosis is based on the first 2 diagnostic criteria with no systemic sign of severe systemic inflammatory response syndrome (SIRS) or persistent organ failure. There is also a CT scoring system called Balthazar Scoring (CTSI), which can be used to stage the severity of the pancreatitis and to look for any necrosis, supportive or hemorrhagic pancreatitis.(15)

Among 780 patients, 620 patients were subjected to CECT Abdomen .Most of patients were having moderate pancreatitis (61.5%) based on CT severity index.

Another major outcome of the study was the complications of acute pancreatitis.

208 cases (26.7%) had complications, with pseudocyst as commonest complication (7.2%) This is a logical sequence in term that severely affected patients with acute pancreatitis had more morbidities compared to mild-moderate cases. The latter was reported also by C Bassi and colleagues.(17) . There were 18 (2.3%) deaths among 780 patients secondary to acute pancreatitis in our study and this could be attributed to many factors such as early diagnosis of the disease, prompt management and perhaps a small number of patients. This study is not without limitations. Due to its retrospective nature, we couldn't look at the association of antibiotic use vs. non antibiotic use in the severe cases and the outcome of that. The study was conducted in one center ,in one department only, so it was impossible to draw a conclusion that our study was representative of the pattern of acute pancreatitis . Another big obstacle for our study was the incorrect labelling of the diagnosis, i.e. abdominal pain was labelled as pancreatitis in many cases.

CONCLUSION

Pancreatitis affects males more than females. In males it is often related to alcohol, whereas in females it is often related to biliary tree disease. The pattern of acute pancreatitis in our study at GMC Jammu was, to some extent, similar to the Western countries. Severe cases were associated with more complications and recurrence. Furthermore, larger prospective cohort studies are needed.

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