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"CLINICAL PROFILE AND OUTCOME OF TREATMENT OFACUTE PANCREATITIS: A RECORD BASED STUDY IN A TERTIARY HOSPITAL".

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Abstract:

Acute pancreatitis is a common surgical condition encountered in daily basis in surgical OPD and a common surgical condition requiring admission. Because of the frequent emergency, multimodality presentation, difficult preoperative diagnosis and management of complications of acute pancreatitis, thisstudy is taken up in which we will be describing the various predisposing factors, clinical presentation, complication, treatment and outcome of such patients.

Key words: Acute Pancreatitis.

Introduction:

Acute pancreatitis is defined as an inflammatory process of pancreas with possible peripancreatic tissue and multiorgan involvement including multiorgandysfunction syndrome with an increased mortality rate[1].

The underlying mechanism of injury in pancreatitis is thought to be premature obstruction of pancreatic enzymes within pancreas, leading to a process of autodigestion. Once the cellular injury has been initiated, the inflammatory process can lead to pancreatic edema, hemorrhage and eventually necrosis. Asinflammatory mediators are released into the circulation, systemic complications can arise, such as hemodynamic instability, bacteremia (due to translocation of gut flora), acute respiratory distress syndrome and pleural effusion, gastrointestinal hemorrhage, renal

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failure and Disseminated Intravascular Coagulation[2].

Acute pancreatitis may be categorized as mild or severe. Mild acute pancreatitisis characterized by interstitial edema of the gland and minimal organ dysfunction. Severe acute pancreatitis is characterized by pancreatic necrosis, severe systemic inflammatory response and often multiorgan failure[3].

80% patients will have mild attack of pancreatitis, the mortality from which is around 1%. In those who have severe attack of pancreatitis the mortality variesfrom 20% to 50%. About one third of death occur in the early phase of attack, from multiple organ failure, while death occurring after first week of onset are due to septic complications. Most patients of acute pancreatitis recover withoutcomplications. The overall mortality rate of this illness is between 2-5%[2,3].

In spite of technical advances in medical and surgical fields acute pancreatitisremain a major cause of morbidity and mortality[6].

Because of the frequent emergency, multimodality presentation, difficult preoperative diagnosis and management of complications, this challengingsubject is taken up for the present study in which we will be describing thevarious clinical presentation complication and management of acute pancreatitis[4,5].

AIMS & OBJECTIVE

- To RETROSPECTIVELY study the clinical profile of patients with Acute Pancreatitis.

- To RETROSPECTIVELY study the outcome of management of Acute Pancreatitis.

Material & Methodology

Study design: Retrospective record based cross sectional study

Study setting: admitted cases of pancreatitis in department of surgery, MIMS,Mandya District

Study population: All patients with a diagnosis of Acute Pancreatitis admittedto the MIMS Mandya between 01/07/2021 to 01/07/2022.

Study period:12 months.

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Sample Size: 40

Inclusion criteria:

1. Patients admitted in department of general surgery and diagnosed to haveacute pancreatitis
2. Known cases of acute pancreatitis with recurrence were included.
3. Age more than 14years

Exclusion criteria: Acute episode in patients with chronic pancreatitis.

Method of data collection:

All patients with a diagnosis of AP admitted to the MIMS Mandya between 01/07/2021 to 01/07/2022 will be reviewed. The epidemiological profile, clinical presentation, treatment modalities and outcomes of patients with APwill be studied retrospectively.

The study population will be selected from hospital data, those who fulfils the diagnostic criteria. The diagnostic criteria included at least one of the following

1. Serum amylase more than 4 times the upper limit of normal.
2. Serum lipase more than 2 times the upper limit of normal.
3. Ultrasound or CT scan suggestive of acute pancreatitis.

This was based on the U.K. Guidelines for the management of acutepancreatitis.

On admission, history was collected and thorough physical examination done. Data collection on admission included age, sex, address and clinical presentation with respect to pain, vomiting, gallstones, alcoholism, trauma anddrugs were noted. History of previous episodes and co-morbidities were noted.

Data analysis:

Data will be entered into Microsoft excel (Windows 7; Version 2007) and analysis will be done using the Statistical Package for Social Sciences (SPSS) for windows software (Version 22.0; SPSS Inc, Chicago). Descriptive statisticssuch as mean and standard deviation for continuous variables, frequencies and percentages will be calculated for categorical variables.

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Observations and Results:

Out of 40 patients included in study, predominantly were males 31 (77.5%) and 09 (22.5%) were females (table 1). Majority of patients were belonging to the agegroup of 41-60 (50%) with a median age of 49.5 yrs. (table 2).
Most common etiology for Acute pancreatitis was Biliary (47%) followed by Alcoholism (36%). Hyperlipidemia (2.5%)and Traumatic (2.5%) pancreatitis wasfound in one patient each and where no cause was found was labelled as Idiopathic (12.5%) (table 3).
In our study, Biliary pancreatitis was the sole cause of acute pancreatitis in Females 100%. In Males, Alcoholism induced pancreatitis (46%) was most common, second commonest was Biliary etiology (table 4).
In the study diabetes mellitus (p=0.027) was most prevalent in the study population 67% and second most in our study population was Alcoholism (p=0.114) in 46% patients. Obesity (p=0.004) was found in 28% patients (table 5).

OBSERVATIONS AND RESULTS

Table-1: sex distribution

Sex	No of patients	Percentage
Male	**31**	**77.%**
Female	**09**	**22.5%**
Test used	**Chi square (x^2) = 9.448**	**p Value = 0.002(s)**

Table-2: Age distribution:

Age	No of patients	Percentage
14-20	**3**	**5%**
21-30	**5**	**12.5%**
31-40	**5**	**12.5%**
41-50	**11**	**30%**

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51-60	**7**	**20%**
61-70	**6**	**15%**
71-80	**3**	**5%**
Test used	**Chi square (x^2) = 9.000**	**p Value = 0.174(ns)**

Table-3: Etiology of Acute Pancreatitis:

Etiology	No of patients	Percentage
Biliary	**19**	**47%**
Alcoholism	**14**	**36%**
Hyperlipidemia	**1**	**2.5%**
Traumatic	**1**	**2.5%**
Idiopathic	**5**	**12.5%**
Test used	**Chi square (x^2) = 17.558**	**p Value = 0.002(s)**

Table-4: Etiology & Sex Distribution of Acute Pancreatitis:

Etiology	Males	Females	Percentage	Percentage
Biliary	**11**	**7**	**33.3%**	**100%**
Alcoholism	**15**	**0**	**46%**	**0**
Hyperlipidemia	**1**	**0**	**3.03%**	**0**
Traumatic	**1**	**0**	**3.03%**	**0**
Idiopathic	**5**	**0**	**15.5%**	**0**
Test used	**Chi square (x^2) = 10.37**		**p Value = 0.035(s)**	

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Table-5: Co-morbidities in Acute Pancreatitis:

	No. of pt.	Percentage	Chi square (x^2)	p- value
Alcoholism	**15**	**46%**	**2.50**	**0.114**
Diabetes mellitus	**27**	**67%**	**4.90**	**0.027**
obesity	**11**	**28%**	**8.10**	**0.004**

DISCUSSION

Acute pancreatitis is a significant health problem which leads to close to quarterof million hospital admissions in USA per year. Approximately 300,000cases occur in the United States each year, 10 to 20% of which are severe, leading to over 3000 deaths[1]. Pancreatitis is a contributing-factor in an additional 4000 deaths annually and inflicts a heavy economic burden, accounting for more than $2 billion in health costs annually in the United States[2]. Unpredictable natural history and diagnostic delay often leads to belated and ineffective interventionsin these cases. Being able to predict the prognosis of a patient with acute pancreatitis at admission forms a very important strategy considering that this will enable us to practice guidelines forstandardization of management of the patient, viz., the use of antibiotics, timings of computed tomography scans, useof ERCP and operative intervention. This will in turn translate into improved outcomes.

Out of 40 patients included in study, 31(77.5%) were males and 09 (22.5%) were females. In our study, majority of patients at the age group of 41-60 (50%). The median age is 49.5 yrs. In a study by Savio G Barreto andJude Rodrigues[3] (96.1%) are Males and 11 females (3.9%). The median agewas 40years.

In a study by Baig SJ[4] and colleagues 73.33% were male and 26.7% were female. The mean age of the patients was thirty years: Male's preponderance was there in our study as along with Savio G Barreto and JudeRodrigues[5] andBaig[4] colleagues study.

In our study, biliary pancreatitis (47%) is the most common cause for acute pancreatitis, alcoholism was the second most common cause. Hyperlipidemia(2.5%) and traumatic (2.5%) pancreatitis, was found in one patient each. Patients (12.5%) were labelled idiopathic when no cause was found.

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In other studies, biliary pancreatitis was most prevalent. The combined etiology of alcohol and biliary pancreatitis is 82.5% which is fairly consistentwith the other studies.

Table-6: Comparing etiology of our study with various studies:

Author	Origin	Number	alcohol	Gall stone	idiopathic
Mann et al[6]	England	631	30%	29%	NS
Toh et al[7]	England	186	20%	33%	15%
MoMi et al[8]	Scotland	759	33%	47%	14%
Thomson et al[9]	Scotland	378	15%	41%	9%
Carnovale et al[10]	Italy	135	6.5%	68.7%	NS
Savio G Barreto, Jude Rodrigues[11]	India	282	92.6%	6.7%	NS
Our Study	India MIMS	40	36%	47%	12.5%

In the study Biliary pancreatitis was the sole cause of acute pancreatitis infemales - 100%.

In males alcoholism induced pancreatitis 46% was most common, secondcommonest is Biliary etiology.

P. Kandasami[l2] and colleagues study 78% of males the predominant etiology is alcoholism. 77% of females the etiology for acute pancreatitis is Biliary etiology.

In the study diabetes mellitus (p=0.027) was most prevalent in the study population 67% and second most in our study population was Alcoholism(p=0.114) in 46% patients. Obesity (p=0.004) as defined by the. current definition were prevalent in 28.

In the study alcoholism was most common cause of death among study population 60% and biliary pancreatitis was second most common in 40%patients.

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Conclusion

- Acute pancreatitis is an acute inflammatory process of the pancreas with variable involvement of other regional tissues or remote organ systems.
- Predicting the prognosis of a patient with acute pancreatitis at admissionforms a very important strategy in management of Acute pancreatitis, considering this, it enable us to practice guidelines for standardization of management of the patient which will in turn translate into improved outcomes.
- This observation has prompted several groups of investigators to undertake studies designed to determine which clinical, chemical, or radiologic parameters might be used to identify those patients destined toexperience a severe illness.
- From the results observed thereof and discussions outlined in the previous chapters, the following broad conclusions could be derived.
- Total 40 patient's CASE SHEETS were included in study according to inclusion and exclusion criteria between 01/07/2021 to 01/07/2022.
- Out of 40 patients included in study, predominantly were Male 31 (77.5 %) and 09 (22.5%) were females.
- Majority of patients were belonging to the age group of 41-60 (50%) witha median age of 49.5 yrs.
- Most common etiology for Acute pancreatitis was Biliary (47%) followedby Alcoholism (36%), Hyperlipidemia (2.5%) and Traumatic (2.5%) pancreatitis was found in one patient each and where no cause was found was labelled as Idiopathic (12.5%).
- In our study Biliary pancreatitis was the sole cause of acute pancreatitis in Females 100%
- In Males, Alcoholism induced pancreatitis 46% was most common, second commonest was Biliary etiology.
- In the study diabetes mellitus (p=0.027) was most prevalent in the study population 67.5% and second most in our study population was Alcoholism (p=0.114) in 46% patients. Obesity (p=0.004) was found in28% patients.
- In our study alcoholism was most common cause of death among study. population 60% and biliary pancreatitis was second most common in 40% patients.

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