



A STUDY OF OCCURRENCE AND SEVERITY OF PANCREATITIS IN CASE OF GALL STONE DISEASE

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ABSTRACT **INTRODUCTION:** Exact mechanism for gall stone causing pancreatitis is not known but two accepted theories are: The first mechanism is based on the Reflex theory which proposed that usually the stones impact the ampulla of Vater and then it builds a common channel which allows the bile salt to the reflux inside the pancreas. The second mechanism is inculcated from the Obstructive theory according to which the pancreatic injury is because of some excessive pressure which forms inside the pancreatic duct. That increased intraductal pressure is because of the continuous secretion of the pancreatic juice inside the existence of the pancreatic duct obstruction. **AIM:** A study of occurrence and severity of pancreatitis in case of gall stone disease. **OBJECTIVES:** 1) To see the occurrence of gall stone induced pancreatitis among all the cases of acute pancreatitis 2) To observe the age distribution and severity of gall stone induced pancreatitis. **MATERIAL AND METHOD:** a cross sectional study done on 57 Patients admitted with provisional diagnosis of pancreatitis in case of gall stone disease in TMMC&RC. Period of study was 18 months. **CONCLUSION:** study showed that the incidence of pancreatitis is more in female and is of mild to moderate severity that means if managed properly it decreases the morbidity and mortality.

KEYWORDS :

INTRODUCTION

The research regarding the pathophysiology of the cases of acute pancreatitis have dramatically advanced since the past two decades and there has been a number of several randomized control studies for identifying the severe cases of pancreatitis and their link up with some other diseases of co-morbidities. Although the exact mechanism responsible for triggering pancreatic injury among the patients with gallstones is not being totally understood but it is being observed that the gall stone induced pancreatitis mainly occurs due to the following two factors:

The inflammation which is associated with cholangitis and extends directly till the pancreas obstruction of outflow of pancreatic juice due to CBD stones.

The first mechanism is based on the Reflex theory which proposed that usually the stones impact the ampulla of Vater and then it builds a common channel which allows the bile salt to the reflux inside the pancreas.

The second mechanism is inculcated from the Obstructive theory according to which the pancreatic injury is because of some excessive pressure which forms inside the pancreatic duct. That increased intraductal pressure is because of the continuous secretion of the pancreatic juice inside the existence of the pancreatic duct obstruction.

Also while identifying the complications which take place because of the acute biliary pancreatitis (the system, renal insufficiency, pleural effusion ARDS, multi organ failure) as well as the local (pseudocyst formation, necrosis, abscess, hemorrhage) often needs the management of Intensive Care Unit².

Moving on in the year 1974 it was identified by Acosta and Ledesma after examining the stools of 36 patients suffering from gall stone pancreatitis that 94% of the patients, that is 34 of them had passed stones during the time of attack. After 2 years it was reported by Kelly from his findings of gall stones in the stools from 84 of the patients suffering from biliary pancreatitis that in only 11 % of the patients simple cholelithiasis was noticed which was further supporting the activity of transient passage of the gall stones for leading to pancreatitis 5,6.

MATERIAL AND METHOD

Source of data: Patients admitted with diagnosis of pancreatitis in case of gall stone disease in TMMC&RC.

Study type: cross sectional

Period of study: 18 months

Number of cases: 57 Cases

INCLUSION CRITERIA : All patients of age more than 18 yrs admitted to TMMC& RC diagnosed as a case of gall stone induced pancreatitis.

EXCLUSION CRITERIA : Acute pancreatitis due to other cause: Alcohol, Trauma, Post ERCP, Drug induced

METHODOLOGY:

CRC & IEC approval taken and subject included in study satisfying inclusion criteria after getting written and informed consent.

Assessment of patients in terms of severity done at time of admission, after 48 hrs of admission and during hospital stay with the help of modified CT severity index and Ranson's criteria for biliary pancreatitis. Relevant biochemical parameters noted.

Assessment done to reach the final conclusion.

Results:

Table 1: - Represent the frequency distribution of the cases according to Age Group.

Age Group	Frequency	Percent
21 to 30	25	43.1
31 to 40	16	27.6
41 to 50	7	12.1
51 to 60	5	8.6
Greater than 60	3	5.2
Less than equal 20	2	3.4

Table 2:- Represent the Mean of the cases according Modified CT severity index.

	Mean	Std. Deviation
Modified CT severity index	1.97	1.737

Table 2 shows the Mean Modified CT severity index, where the Mean Modified CT severity index was 1.97±1.737 and the maximum was 6 and the minimum was 0.

Table 3:- Represent the Mean of the cases according Ranson's criteria for biliary pancreatitis.

	Mean	Std. Deviation
Ranson's criteria for biliary pancreatitis	2.31	1.453

Table 3 shows the Mean Ranson's criteria for biliary pancreatitis, where the Mean Ranson's criteria for biliary pancreatitis was 2.31 ± 1.453 and the maximum was 8 and the minimum was 1.

DISCUSSION:

It was also being noticed that the size of the stone and the gender of the person act as risk factors for the gall stone induced pancreatitis because the risk of developing this acute pancreatitis is much more in men suffering from gall stones rather than women. Although, more women also tend to develop this disorder because gall stones usually occur in increased frequency among women⁴.

Total data pertaining to the severity of pancreatitis in case of gall stone disease in patients admitted in TMMC&RC is 58 and analysed in total three tables which are provided with explanation. Beginning with the age of the study subjects/ patients, the Representation of the average age along with the changeability standard deviation shows that the mean value was 43.1 years along SD of 3.4 years. The maximum age of the study subjects has been noted as above 60, whereas the minimum age was less than 20 years.

Table 1 demonstrates the frequency distribution of Age Group, where maximum percentages of subjects were found in 21 to 30 i.e., 43.1%.

Table 2 shows the Mean Modified CT severity index, where the Mean Modified CT severity index was 1.97 ± 1.737 and the maximum was 6 but the minimum was 0.

Table 3 represents the Mean Ranson's criteria for biliary pancreatitis, and over there the Mean Ranson's criteria for biliary pancreatitis was 2.31 ± 1.453 and the maximum was 8 while the minimum was 1.

CONCLUSION

Mild form of pancreatitis usually managed conservatively, some require ERCP. It merges X-ray and the use of an endoscope into a long, flexible, lighted tube³. After ERCP lap cholecystectomy can be performed. There can be variation in time interval between ERCP and lap cholecystectomy which is decided by severity of pancreatitis. Patients with severe form of pancreatitis and cholangitis can benefit from ERCP & sphincterotomy (ES). Cholecystectomy is done after pancreatic necrosis is managed. Gradually it gets comprehended that pro inflammatory mediators like Tumor necrosis factor - α , interleukins, etc. plays role in management of Acute pancreatitis. Necrosis has a relatively compatible trait. Serum interleukin-6 increases within 48 hrs of the Acute pancreatitis. When in professional hands, the complication rate of ERCP, seems to be lower.

SUMMARY

Though tertiary care hospitals perform several ERCP and other endoscopic procedures but are not possible in secondary care hospitals due to lack of experienced gastroenterologist and it is advisable for gastroenterologist to select the patient for ERCP more wisely and judiciously. This can also be determined by endoscopic USG which helps to identify the patient who can benefit from ERCP.

It is not possible to completely avert gallstone pancreatitis, since it is not likely to totally avoid gallstones from budding. Though, one can take steps to lessen your gallstone risk. Eat a healthy and hearty diet, stay at a well weight, keep your cholesterol levels inside a normal range, and control diabetes if you have it. (Johns Hopkins Medicine, n.d.).

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