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INCIDENCE OF POST ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) PANCREATITIS (PEP) A SINGLE CENTRE EXPERIENCE.

Gastroenterology

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ABSTRACT

INTRODUCTION: Development of pancreatitis is a serious complication of ERCP procedure and it results in significant morbidity , occasional mortality. The chance of occurrence of this complication varies from 3 to 15 percent of cases in various studies worldwide1.

AIM: To study the incidence of post ERCP pancreatitis in patients who underwent ERCP for management of obstructive jaundice. To identify the possible risk factors for Post ERCP Pancreatitis. To study the course and management of PEP.

MATERIALS AND METHODS: Total 384 patients were included . The duration of study is from January 2017 to July 2018. All the patients were subjected to either CT scan abdomen or MRCP before subjecting for therapeutic ERCP for various etiological conditions of obstructive jaundice . After the ERCP, these patients were observed for development of pancreatitis.

RESULTS: Mean age of the patients was 54 years of which males were 256(67%) and females were 128 (33%). Most common indication for ERCP was choledocolithiasis 212 (46.9%) followed by benign CBD stricture 54 (11.9%) cholangiocarcinoma 47(10.3%), pancreatic malignancy 41 (9.09%), malignant cbd stricture 35(7.7%), ampullary growth 32 (7.07). PEP developed in 12 (3.125%) patients. 4 had history of co morbid illness D.M 1 had HTN . 9 patients had mild pancreatitis 2 patients had moderately severe pancreatitis, one patients developed severe pancreatitis.

KEYWORDS

INTRODUCTION:

Development of pancreatitis is a serious complication of ERCP procedure and it results in significant morbidity , occasional mortality .The chance of occurrence of this complication varies from 3 to 15 percent of cases in various studies worldwide1. About 5 percent of post ERCP pancreatitis will follow a severe course, requiring prolonged hospitalization. Important risk factors include endoscopist inexperience, sphincter of Oddi dysfunction, difficult cannulation, and the performance of a therapeutic (rather than diagnostic) ERCP]. However, severe, and even fatal, pancreatitis can occur even after diagnostic ERCP [5]. Risk factors for PEP are additive [3,17]. As an example, the combination of young age, female sex, suspected sphincter of Oddi dysfunction, normal bilirubin, a difficult cannulation, and the absence of bile duct stones is associated with a risk of pancreatitis of over 40 percent.

AIM:

To study the incidence of post ERCP pancreatitis in patients who underwent ERCP for management of obstructive jaundice.

To identify the possible risk factors for Post ERCP Pancreatitis.
To study the course and management of PEP.

Materials and methods

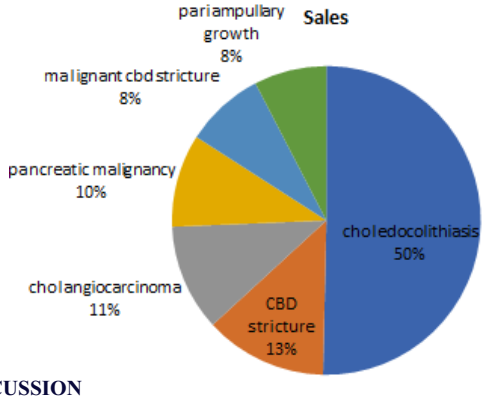
Total 384 patients were included . The duration of study is from January 2017 to July 2018. All the patients were subjected to either CT scan abdomen or MRCP before subjecting for therapeutic ERCP for various etiological conditions of obstructive jaundice . After the ERCP, these patients were observed for development of pancreatitis.

Diagnosis of PEP was made according to standard Atlanta classification, which mandates the presence of 2 of the three following features. a. Pain abdomen typical of Acute pancreatitis b.3–fold elevation of amylase / lipase c. Evidence of pancreatic inflammation on abdominal imaging. The diagnosis of PEP can be complicated since pancreatic enzyme elevations are common following ERCP but are often not associated with clinical pancreatitis. For this reason, amylase and lipase should only be checked in patients with signs and symptoms suggestive of pancreatitis after ERCP.In patients suspected of having pancreatitis, the degree and rapidity of the pancreas enzyme elevations may be a way to differentiate patients with PEP from those with pain from other causes. These patients were further classified into mild moderately severe and severe basing on revised Atlanta classification.

RESULTS:

Mean age of the patients was 54 years of which males were 256(67%) and females were 128 (33%). Most common indication for ERCP was choledocolithiasis 212 (46.9%) followed by benign CBD stricture 54 (11.9%) cholangiocarcinoma 47(10.3%) , pancreatic malignancy 41 (9.09%), malignant cbd stricture 35(7.7%), ampullary growth 32 (7.07). PEP developed in 12 (3.125%) patients . 4 had history of co morbid illness D.M 1 had HTN . 9 patients had mild pancreatitis 2 patients had moderately severe pancreatitis, one patients developed severe pancreatitis . Of these 12 patients who developed pancreatitis 6 were males 6 were females. 3 were aged >60years 9 were<60 years .6 patients had choledocolithiasis 3 had cbd stricture 2 had pancreatic malignancy 1 having cholangiocarcinoma. Spinchterotomy was done in 8 patients .Wire guided cannulation was done in all the patients . Contrast injection was given in 3 patients . .Rectal indomethacin was administered for the patients with multiple pancreatic duct cannulations. Pancreatic stenting was not done prophylactically to prevent PEP. Multiple cannulation attempts were done in 10 patients . All 12 patients presented with abdominal pain 9 had associated vomiting .Mean duration of hospital stay for mild acute pancreatitis is 2-4 days, moderately severe was 5-10 days and with severe was 25 days. 2 Patients latter went on to develop complications of acute pancreatitis i.e psuedocyst of pancreas. These patients were managed further.

Incidence of PEP in various etiological causes



DISCUSSION

In this study, age less than 60 years was found to be a frequent factor regarding post-ERCP pancreatitis, which was supported by other studies. Importantly, risk factors for post-ERCP pancreatitis have been shown to be additive and perhaps synergistic. Taken together, the above variable profiles a patient who may be especially prone to

inflammation of the pancreas after an insult, and therefore warrants special caution. For unidentified reasons, female gender is considered as a post-ERCP pancreatitis risk factor. Perneyet al.and Cheng et al described female gender as a risk factor of post-ERCP pancreatitis in univariate analysis,but not in multivariate analysis. In a study by Freemanet al female gender was found to be a significant risk factor on multivariate analysis with odds ratio of 2.5. Difficult cannulation (characterized by a greater number of attempts or longer time needed to successfully cannulate the bile duct) can result in trauma to the ampulla and increases the risk of subsequent pancreatitis independent of other factors [1, 8, 13]. The risk increases with a greater number of cannulation attempts, with one study which included all types of intra-ERCP procedures describing a 3.3% pancreatitis rate in patients requiring less than five attempts at cannulation, 9% for 6–20 required attempts, and 14.9% if more than 20 attempts were necessary [1]. Spending more than 10 minutes attempting cannulation also increases the risk, although a recent prospective study demonstrated that even a duration exceeding 5 minutes may increase the risk of post-ERCP pancreatitis when compared with shorter-duration attempts [18]. Pancreatic duct cannulation, more than one passage of a pancreatic guide wire, pancreatic duct injection/pancreatogram, pre-cut sphincterotomy (a last-resort technique to gain access to the bile duct after other cannulation methods have failed), pancreatic sphincterotomy, and ampullectomy have also repeatedly been identified as independent risk factors for post-ERCP pancreatitis [1, 5, 14, 15, 17, 19–21]. High-risk procedural factors should warrant consideration of additional measures to limit the occurrence or severity of post-ERCP pancreatitis. Sphincterotomy was found to be an important factor for post-ERCP pancreatitis which was supported by Mehta et al but contrary to Cheng et al Freeman et al.

CONCLUSIONS :

Pancreatitis is a recognized complication of ERCP. While most cases of PEP are mild and self-limited, approximately 10% of patients develop severe pancreatitis. The primary approach to prevention is through careful patient selection, sound endoscopic technique, and evidence-based medical management. Ongoing identification and special attention to risk factors for post-ERCP pancreatitis is vital, in order to optimize patient selection and to guide specific procedure techniques and other prophylactic measures. There are several mechanisms that contribute to the development of pancreatitis and that can be targeted for protective endoscopic or medical therapies. Preventive measures include procedural techniques such as the use of a guide wire cannulation, minimizing the total number of cannulation attempts, and avoiding contrast injections or trauma to the pancreatic duct. The placement of temporary pancreatic stents and administration of rectal NSAIDs in high-risk patients remain the interventions with proven efficacy and thus should be incorporated into clinical practice. High-quality studies are still needed to better evaluate other medical therapies.