



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2015; 1(12): 94-95
www.allresearchjournal.com
Received: 13-09-2015
Accepted: 14-10-2015

Abhishek Shenoy
Undergraduate Student,
JSSMH, JSS University,
Mysore.

Shivanand Reddy KV
Post Graduate, Department of
General Surgery, JSSMH.JSS
University, Mysore-570004

Clinical study of gall stone associated acute pancreatitis in a tertiary care hospital

Abhishek Shenoy, Shivanand Reddy KV

Abstract

In the case of acute pancreatitis, a prompt search for the etiologic condition of the disease should be conducted. A differentiation of gallstone-induced acute pancreatitis should be given top priority in its etiologic diagnosis because it is related to the decision of treatment policy. Examinations necessary for diagnosing gallstone-induced acute pancreatitis include blood tests and ultrasonography. Early ERCP/ES should be performed in patients with gallstone-induced acute pancreatitis if a complication of cholangitis and a prolonged passage disorder of the biliary tract are suspected. The treatment for bile duct stones with the use of ERCP alone is not recommended in cases of gallstone-induced pancreatitis with gallbladder stones. Cholecystectomy for gallstone-induced acute pancreatitis should be performed using a laparoscopic procedure as the first option as soon as the disease has subsided.

Keywords: Gall Stones, Acute Pancreatitis, ERCP.

1. Introduction

Gallstones are the leading cause of pancreatitis worldwide, accounting for at least one half of the 4.8-24.2 cases of pancreatitis per 100,000 people that occur in Western countries. About 80,000 cases occur in the USA; 17 per 100,000 new cases. In Japan, the annual incidence lies between 5-80 per 100,000 of the population ^[1].

Although majority of the patients with gallstone (biliary) pancreatitis recover without significant sequelae, 15-30% have severe episodes requiring multidisciplinary care to ensure the best outcome. Complications of acute biliary pancreatitis, both local (necrosis, pseudocyst formation, abscesses, hemorrhage) and systemic (pleural effusion, adult respiratory distress syndrome (ARDS), renal insufficiency, multiorgan failure) often require intensive care unit (ICU) management ^[2].

Gender and stone size may be risk factors for gallstone pancreatitis. The risk of developing acute pancreatitis in patients with gallstones is greater in men; however, more women develop this disorder since gallstones occur with increased frequency in women ^[3].

This study was undertaken to study the clinical presentation of the patients with gall stone induced pancreatitis in a tertiary care hospital and the management and outcome of the patients.

2. Objectives of the study

1. To evaluate the patients presented to the hospital with features of acute pancreatitis, cause as gall stones.

3. Materials and Methods

Study design: A prospective study

Study duration: One year from September 2014 to September 2015.

Sample Size: 50 patients

All the patients who came to the outpatient and Emergency department with acute abdomen were subjected to ultrasound abdomen and Erect X-ray abdomen and serum amylase and lipase were sent suspecting acute pancreatitis were taken into the study group.

4. Results

Thirty patients were taken into the study group as the and were evaluated and managed. Among the study subjects 39 were male patients and 16 were female patients. Among the

Correspondence
Shivanand Reddy KV
Post Graduate, Department of
General Surgery, JSSMH.JSS
University, Mysore-570004

50 patients 28 patients were found to be having alcohol induced Pancreatitis, 14 were found to be associated with gall stone induced Pancreatitis which accounts for 28 % of the patients. Remaining eight patients were found to have pancreatitis associated with other causes which were evaluated accordingly. Among the 14 patients with gall stone induced pancreatitis all the 14 patients had cholelithiasis associated with choledocholithiasis. Among the 14, two patients were in Acute cholangitis.

All the fourteen patients were subjects to ERCP once they were clinically stable and the CBD was swept of all the stones and CBD stent was placed in situ and were advised for removal after 6 to 8 weeks.

All the patients recovered very well after the ERCP was done and the cause for pancreatitis was dealt with. Patients were advised to undergo laparoscopic cholecystectomy after an interval of 6 weeks.

5. Discussion

The treatment of gallstone pancreatitis is usually conservative, including bowel rest and intravenous fluid replacement. Fluid resuscitation is vital but often inadequate or over looked.

A British group was the first to prospectively evaluate the role of ERCP in acute biliary pancreatitis. About 121 patients with acute pancreatitis and ultrasound evidence of gallstone disease were randomized to either conventional medical management or urgent ERCP within 72 hours. Patients were stratified by severity of illness; one-half of the patients randomized to ERCP had severe pancreatitis. CBD stones were found in 63% of patients with severe pancreatitis, but only 25% of those with mild pancreatitis. Sphincterotomy was performed in patients with bile duct stones. In the group randomized to intervention with ERCP and sphincterotomy, there was a significant reduction in complications in those with severe disease, 24% with 4% mortality vs. 61% with 18% mortality. However, there was no difference in outcome of patients with mild pancreatitis.

This meant that many patients were being subjected to an invasive procedure after they passed the offending bile duct stone.

In an effort to increase the yield of ERCP in this setting, a variety of predictive scoring systems have been developed. Although critics suggest that the improvement seen in urgent ERCP patients was solely because of relief by cholangitis, when this diagnosis is excluded, a statistically significant benefit can still be shown for patients with predicted severe acute pancreatitis.

The second single center randomized controlled trial of endoscopic therapy in gallstone pancreatitis was published in 1993, by Fan *et al.* In an effort to determine whether early (i.e., within 24 hours of being admitted) ERCP and biliary stone extraction would improve outcome in gallstone pancreatitis when compared to a conservative approach, 195 patients were randomized between the two study arms.

The conservative treatment patients underwent ERCP and endoscopic stent (ES) only if their clinical condition deteriorated. Complications were classified as local (pancreatic abscess, pseudocyst, phlegmon, pseudo aneurysm), systemic (renal failure, respiratory failure, shock, coagulopathy) and biliary (sepsis requiring surgical or endoscopic intervention).

There are previous studies which had similar results when compared to our study with incidence being 42 % in a study conducted by Riela *et al.* [7].

Recurrent biliary pancreatitis in patients with moderately severe gallstone pancreatitis is negligible after ERCP. Hospital discharge of these patients permits interval laparoscopic cholecystectomy, but close follow-up is necessary in these potentially ill patients.

According to our study patients with mild to moderate gallstone pancreatitis without cholangitis, selective postoperative ERCP and CBD stone extraction are associated with a shorter hospital stay, less cost, no increase in combined treatment failure rate, and significant reduction in ERCP use compared with routine preoperative ERCP. However, the study is limited by its small sample size.

6. Conclusion

Gall stone induced pancreatitis is the second most common cause of pancreatitis only next to alcohol induced pancreatitis. So, patients presenting to us with features of Acute Pancreatitis should always be kept in mind about the possibility of Gall stones and should be worked up for ERCP if associated with CBD stones and should undergo Laparoscopic cholecystectomy once the patients condition improves clinically.

7. References

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