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MANAGEMENT OF ACUTE PANCREATITIS LINKED WITH CALCULUS CHOLECYSTITIS BY ELECTIVE AND EMERGENCY SURGERY AND ITS IMPORTANCE

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Abstract:

Objective: *To evaluate the importance of elective and emergency surgery in the treatment of acute pancreatitis due to gallstone disease in our structures.*

Study Design: *A Quasi-experimental study.*

Place and Duration: *Surgical Unit II, Services Hospital, Lahore for one year duration from July 2017 to July 2018.*

Methodology: *28 patients of acute pancreatitis with cholecystitis due to gallstone disease. Clinical study and research routine in these patients were performed on the basis of elevated serum amylase (> 1000 IU / L) in the presence of cbd stone and the diagnosis of acute pancreatitis with ultrasound gall bladder. Within 48-72 hours the patients who didn't respond to conservative treatment was done with surgery, while patients responded well with late surgery after 48-72 in patients.*

Results: *Cholecystitis patient's age was between 24 and 71 years. In 28 patients, 20 were female and eight men, with the calculation of acute pancreatitis (mean age 47, 50 years). They presented with pain in the upper abdominal region, nausea, vomiting, fever, and tenderness. Serum amylase was found in all (18) gallstones, all patients found between 1000 and 2000 U / L amylase levels, but between 1000 and 9000 U / L CBD calculations in six patients (22.02%) and CBD sludges in one patient (% 3:57). In 12 patients (43.05%), early surgery was done and in 11 patients (39.28%) late surgery was performed; 3 patients (11.01%) did not return due to late surgery and due to pancreatitis complications two (06.99%) died. The maximum length of stay in Hospital was 27 days and 2 days was the minimum stay; The average accommodation was 15.05 days.*

Conclusion: *Acute pancreatitis is the most common etiological factor in patients with gallstones and CBD stones result in acute disease in most of the patients. Conservative treatment responded well in most of the patients, but to be on the safe side early surgery is recommended, preventing recurrences and reducing stay in hospitals.*

Key words: *Cholecystitis, acute pancreatitis, serum amylase, gallstones.*

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INTRODUCTION

Acute pancreatitis is not a rare condition in emergency surgery units. Sometimes it can be difficult to diagnose. Although serum amylase was used as a diagnostic rod, its value on the basis of lack of sensitivity and specificity was questioned. However, other reasons due to the tests can be performed as serum aminotransferase aspartate, aminotransferase, lipase and lipase / amylase alanine trypsin level to distinguish patients with bile acute pancreatitis. Initially, the alanine aminotransferase level was the selection test to identify ABP due to a frequency of average 0.76 diseases. When a prevalence of disease is> 0.76, the amylase/ lipase ratio provides the maximum knowledge about diagnostic methods. The etiology of abdominal acute pancreatitis is the easy to know by identifying the absence or presence of gallstones, but the rate of failure is attributed to obesity of 5-10%, gas distention intestine, massive acids and upper abdominal surgeries done previously. After abdominal ultrasound the second choice of investigation is CT scan. Although alcohol is present in Western countries but in our country the main etiology of acute pancreatitis is gallbladder-related adults gallstones and other diseases. Because the pancreas is closely related to the extra hepatic biliary tract and duodenum, many patients suffering from gallbladder disease from acute cholecystitis suffer from acute pancreatitis simultaneously. According to one study, approximately 55% of patients with acute pancreatitis are associated with diseases of the biliary tract. Pancreatitis associated with gallstones has greater mortality because patients are in the older age group. The outcome depends on the severity of the disease. Treatment, intravenous fluids such as supportive measures, targeting, analgesics, intravenous drainage blocked gallstones to remove gallstones (in some cases) surgery or endoscopy followed by nasogastric suction and control, orally, zero pancreas. In a few cases, the pancreas should be resected to manage fulminant pancreatitis. The aim of this analysis is to investigate the role of elective and emergency surgery in the treatment of acute pancreatitis due to gallstone disease.

MATERIALS AND METHODS:

This Quasi-experimental study was held in Surgical Unit II, Services Hospital, Lahore for one year duration from July 2017 to July 2018. 28 patients with acute pancreatitis due to gallbladder disease were selected. A detailed history was obtained from all patients and a complete clinical examination was performed. In addition to normal examinations, amylase serum and urine, LFT, serum electrolytes, calcium, blood sugar, ultrasound and X-ray were performed of the abdomen. Serum amylase levels> 1000 IU / L within 24 hours, urinary amylase> 3000 U / L CBD and edematous pancreatic gallbladder stone and / or positive ultrasound ultrasound showed acute pancreatitis. Initially all patients were treated conservatively (cephalosporins or ampicillin 1. generation, cephalosporins and patient signs and if they developed signs of toxicity), ranitidine or cimetidine and trace. Patients, if any, were evaluated for severe pancreatitis according to (Ransons score) including nine prognostic factors. Patients who responded well during this time of late surgery did not respond to medical treatment or within 48 to 72 hours of the previous surgery he demanded early surgery.

RESULTS:

During the analysis, 28 total patients with acute pancreatitis related with gallstone cholecystitis were included in the study. Of these, 20 (71.42%) were female, 8 (28.57%) were male and 1: 2.5 were male and female. The age of the patients was between 24-71 years and the 47.61 was the mean age shown in Table 1.

Table I. Serum Amylase Levels

Serum Amylase	No.	%
1001-2000 IU/L	18	64.30
2001-3000 IU/L	2	7.14
3001-4000 IU/L	2	7.14
4001-5000 IU/L	1	3.57
5001-6000 IU/L	2	7.14
6001-7000 IU/L	2	7.14
7001-8000 IU/L	—	—
8001-9000 IU/L	1	3.57

Vomiting, Nausea, tenderness and pain were found in all patients in the right hypochondrial; Eight patients with pain and tenderness around the abdomen in three cases were epigastric and also had pain and tenderness in two in the left upper quadrant. In 13 (47.02%) patients, pain was severe and in 11 patients (38.98%) have moderate pain and mild in one patient (3.57%). The strict fever was observed without compulsion in nine (32.14%) and four (14.28%) patients. Anemia was found in 11 patients (39.28%) and jaundice in 13 patients (46.42%). In all cases, Serum Amylase level was high and in 16 patients urinary amylase (> 3000U / L) was high. In five (17.85%) patients Hyperglycemia was found, hypokalemia (<3.5mEq / l) 8 (28.57%) and hypocalcemia (<9Gm%) 11 (39.28%). Ultrasound showed the gallstones in each case in the abdomen, calculations CBD 6 (21.42%) and in one case mud CBD (3.57%); in 9 patients (32.14%) Edematous pancreas was noted.

Table II. Surgical Procedures performed

Surgical Procedure	No.
Early Cholecystectomy	5
Early Cholecystectomy+ Choledocholithotomy	6
Early Cholecystectomy+ Transduod. Sphincterotomy	1
Elective Cholecystectomy	10
Elective Cholecystectomy+ Cystgastrostomy	1

According to the Ranson criteria, 17 (60.71%) patients had a severe attack of 6 (21.43%), mild, moderate and 5 (17.86%) non-acute pancreatitis. All patients were treated conservatively Initially, 27 (93.06%) improved, but 2 (06.99%)patients were died due to complications. As shown in Table II, early surgery was performed in 12 (42.85%) patients and 11 (39.28%) patients. For elective surgery, 3 patients did not come back.

TABLE 2

Gallstone complications

Acute cholecystitis
Chronic cholecystitis
Choledocholithiasis
Acute cholangitis
Acute pancreatitis
Empyema in gallbladder
Obstructive jaundice
Choledochoduodenal fistula
Gallbladder perforation

Adapted from information in references 18 and 19.

DISCUSSION:

The incidence of acute pancreatitis has increased in the last 2 to 3 years. This may be due to the westernization of our lifestyle or the availability of better diagnostic possibilities. This study also shows that more women have more acute pancreatitis and gallstones than men (2.5: 1). However, the incidence of acute pancreatitis worldwide is almost the same in both sexes. Acute pancreatitis has been associated with different etiologic factors; Among these, the most common gallbladder disease in our region, alcoholism and obesity in the west (body mass index 30 kg / m2 or more).

Trepnel said there were geographical and random variations because alcoholic pancreatitis was more common in the United States. And in gallstones pancreatitis in Europe. In this study, 6 (21.42%) of the prevalence of choledocholithiasis was detected. In addition, most patients suffering from a combination of gallstone and acute pancreatitis have no gallstones in the blister, and the cause of acute pancreatitis is unclear. The key to the diagnosis of acute pancreatitis is based on finding high pancreatic enzymes in the blood and urine and different markers to predict the severity of the disease. Serum amylase was the main diagnostic tool used in this study, supplemented with urine amylase, blood glucose and urea, serum electrolytes and other tests such as calcium and LFT. Abdominal ultrasound examination and gall bladder are a reliable and accurate method in the first 24 hours, as it can determine the early stage of acute pancreatitis. However, it has a poor diagnostic accuracy in acute pancreatitis, but may give clues about the etiology of the disease. Gallstone pancreatitis is a self-limiting disease, but can sometimes be serious. In our study, mild acute pancreatitis in most patients, Micheal et al. All patients were initially treated conservatively. Of these 26 patients, 92.85% were recovered, but 2 (7.14%) were lost due to multiple organic insufficiency as seen in other series. Two patients who died were women older than 60 years of age and were associated with the findings of Moosa and Stabil. The mortality rate in our study (7.14%) was lower than other studies (15-20%) but could be as high as 30%.

CONCLUSION:

In our society, gallstones are the most common etiological factor of acute pancreatitis. Patients with CBD stones are more likely to develop disease. The incidence was between 50 and 60 years. Serum amylase is the main for the diagnosis of acute pancreatitis. Ultrasonography has a poor diagnostic accuracy compared to compute tomography (93-100%). Most patients responded well to conservative treatment, and this should be the first treatment option for pancreatitis. Early surgery for the correction of biliary pathology after hospitalization after an acute episode is very safe, prevents recurrence and reduces the length of stay because three patients do not return for late surgical

intervention. The overall mortality in our configuration is negligible, ie two (7.34%) cases compared to the other series; Both patients with diabetes mellitus were between the ages of 60 and 70 years.

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