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Research Article

**ANALYSIS OF FREQUENCY OF SILENT GALL-STONES IN
ACUTE PANCREATITIS IN PAKISTAN**AMNA SHAHAB¹, MUHAMMAD AQIL RAZZAQ², MUHAMMAD MUDASSAR
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Article Received: October 2019 **Accepted:** November 2019 **Published:** December 2019**Abstract:**

Introduction: The prevalence of gallstones in adults is about twenty per cent in developed countries, with a yearly increasing incidence rate of 0.60-1.39%.

Aims and objectives: The basic aim of the study is to analyse the frequency of silent gall-stones in acute pancreatitis in Pakistan.

Material and methods: This cross sectional study was conducted in CMH Lahore from 1st January 2018 to 31st December 2018. The study participants were patients who presented in the emergency with acute abdominal pain and were diagnosed with acute pancreatitis. Patients greater than 15 years of age of both gender were included in the study. **Results:** The data was collected from 95 patients during a period of one year. The mean age of the patients were 48.5. From total 95 patients, 41(43.1%) male and 54(56.8%) female presented with acute pancreatitis. As we can see from the results, frequency of acute biliary pancreatitis was higher in females and in elder adults. 78.7% of the patients with biliary pancreatitis had a previous history of biliary colic while 21.3% of the patients had silent gallstones. **Conclusion:** It is concluded that patients with multiple small gallstones have increased risk of presenting with acute biliary pancreatitis. Cholecystectomy may be recommended for asymptomatic patients with microlithiasis.

Keywords: Pancreatitis, Adults, Frequency, Risk factor.

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INTRODUCTION:

In developed countries the prevalence of gallstones in adults is about twenty per cent, with a yearly increasing incidence rate of 0.60-1.39%. In Europe, gallstone hospitalisation is one of the most common gastrointestinal diseases. In Asian countries the prevalence of gallstone disease ranges from 3-10%. The prevalence of gallstones increases with age, and is invariably higher in women than in men [1]. Gallstones, which develop in the gallbladder and bile ducts, present in variable sizes and are composed mainly of cholesterol monohydrate crystals, calcium bilirubinate, mucin gels, and proteins. Gallstones are classified according to their chemical composition as (1) pure cholesterol (>75%), (2) pure pigment, and (3) mixed stones [2].

Due to ubiquitous availability and use of diagnostic ultrasound for a wide range of abdominal complaints as well as 'routine check-ups' has led to increasingly frequent detection of gallstones (GS). The advent and rapid establishment of laparoscopic cholecystectomy as the gold standard treatment of GS has refocused attention on the issue of asymptomatic gallstones (AsGS). 'To treat or not to treat' is the Shakespearean dilemma which most surgeons face very often when dealing with asymptomatic gallstones [3-4].

GS that cause no GS-related symptoms or complications and are diagnosed during routine ultrasound for other abdominal conditions are called asymptomatic or silent GS [5]. Classically, pain due to GS is felt in the right upper quadrant or epigastrium which may radiate to the back or the right scapula. It typically develops rapidly, is severe, steady and unrelieved by usual household remedies, change of position or passage of gas [2]. Whether 'dyspeptic symptoms' in the absence of typical biliary pain can be attributed to GS, remains a debatable issue [6]. Complications include acute cholecystitis which may evolve into empyema, gallbladder perforation or even gangrene of the GB, cholangitis and pancreatitis [7].

Asymptomatic or silent gall-stones occur frequently in the general population, presenting in almost 80% of adults in Europe and the United States [8].

The basic aim of the study is to analyse the frequency of silent gall-stones in patients presenting with acute pancreatitis in Pakistan.

MATERIAL AND METHODS:

This cross sectional study was conducted in CMH Lahore from 1st January 2018 to 31st December 2018. The study participants were patients who presented with acute abdominal pain in the emergency and were diagnosed with acute pancreatitis. Inclusion criteria includes patients 15 years and above of both gender. Diagnosis of acute pancreatitis was based on characteristic symptoms and signs, serum amylase and lipase levels, findings on ultrasound and CT scan abdomen. A detailed data was recorded about age, gender, previous history of biliary colic, findings on ultrasound, CT scan abdomen and endoscopic retrograde cholangiopancreatography (ERCP). The approximate size and number of stones was also noticed.

Statistical analysis:

The data was collected and analysed using SPSS version 20.0. All the values were expressed in mean and standard deviation.

RESULTS:

The data was collected from 95 patients treated for acute pancreatitis during this one year period. Records were obtained from the hospital database to assess the frequency of acute biliary pancreatitis in silent gallstones. The mean age of the patients were 48.5. From total 95 patients, 41(43.1%) male and 54(56.8%) female developed acute pancreatitis. As we can see from the results, frequency of acute biliary pancreatitis was higher in females and in elder adults. The most common cause of pancreatitis was biliary stones 84%, followed by alcoholism 10%, idiopathic 3.1% and viral infection 2.1%.

78.7% of the patients with biliary pancreatitis had a previous history of biliary colic while 21.3% of the patients had silent gallstones and gave no previous history of abdominal pain. It was also observed consistently on ultrasonography that the gallstones were multiple and small sized.

Table 01: Frequency of Acute Pancreatitis and Acute Biliary Pancreatitis in patients

Age range in years	Acute pancreatitis	% age	Biliary pancreatitis	%age
15-25	17	17.8	15	15.7
26-35	20	21	13	13.6
36-45	34	35.7	32	33.6
>46	24	25.2	20	21.1
Total	95	100	80	84

Other non biliary causes 16%		
Alcoholism	Idiopathic	Viral infection
10 (10.5 %)	3 (3.1%)	2 (2.1%)

Symptomatic gallstones	Asymptomatic gallstones
63 (78.7%)	17 (21.2%)

DISCUSSION:

Acute biliary pancreatitis can be a life-threatening condition and can be associated with increased morbidity, making early recognition of the condition of paramount importance. Patients develop a steady pain in the mid-epigastrium or right upper quadrant [9]. In some cases, the pain is diffuse or in the left side. It reaches maximum intensity in about twenty minutes and can last for several days, with possible band-like radiation onto the back. Bending forward can give some pain relief. Biliary colic may occur before acute pancreatitis or may proceed it. The associated symptoms are agitation, nausea and vomiting for several hours [10].

In our study, gall-stones were more frequently found in females 56.8% compared to males 43.1% and in the higher age group 48.5 [11]. A study done in Germany on the etiology of pancreatitis also found biliary etiology of acute pancreatitis was highly associated with older age group and female predominance. These findings indicate that females and obese elder adults are at an increased risk of developing acute biliary pancreatitis [12]. Gall-stones and alcohol represent the most frequent etiology of acute pancreatitis in several global statistics, accounting for around 70%-80% of the cases [13]. In our study too biliary pancreatitis accounted for 84% of cases. The other common causes are hypertriglyceridemia, certain medications, infections and hypercalcemia. Silent gall-stones were found in 21% of our participants suffering from acute pancreatitis where abdominal ultrasonography detected the presence of stones. The proportion of patients with asymptomatic gallstones who go on to develop complications particularly biliary pancreatitis is low not more than 2% and that too over 20-30 year period. [14]

In a study by Diehl et al 50% of patients with acute pancreatitis had 20 or more stones less than 5mm in size [15]. Similar findings were also observed in our study.

Silent gallstones are being diagnosed with increasing frequency because of the easy availability of abdominal ultrasound. However the treatment remains debatable. Prophylactic cholecystectomy is advised for patients who have a high risk of developing complications, risk of gallbladder cancer, diabetics and patients on immunosuppressive therapy.

Treatment of AsGS in patients undergoing transplantation assumes importance because of the need for postoperative immunosuppression. Some of the immunosuppressive drugs such as cyclosporine and tacrolimus are prothrombotic [16]. Masking of signs and symptoms due to immunosuppression may lead to increased morbidity and mortality. The aim of prophylactic cholecystectomy is to remove a possible septic focus as the mortality of emergency cholecystectomy has been reported to be higher in patients on immunosuppression [17].

CONCLUSION:

It is concluded that patients with multiple small gallstones have increased risk of presenting with acute biliary pancreatitis. Cholecystectomy may be advised but need not be urged, for the asymptomatic patient with microlithiasis. In patient who are poor surgical candidates, ERCP with biliary sphincterotomy may be the alternative form of treatment.

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