

A Clinical Study and Follow up of Cases of Acute Cholecystitis

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Abstract

Background: The variety of clinical appearance and comorbid conditions of patients diagnosed as a case of Acute Cholecystitis makes it enormously hard to standardize the treatment. Thus, the clinical decision for treatment regime may not be clear, specifically for aged and critically ill ones with reduced physiologic reserve. The aim is to study socio-demographical and clinical profile of diagnosed cases of Acute Cholecystitis. **Subjects and Method:** The present study is an Observational and Prospective study conducted at SMCH, Ghaziabad (U.P). Duration of this study from November 2018 to April 2020. **Result:** Evidence suggests that the frequency of gallstones increases with age, particularly after age 40 to become 4 to 10 times more likely in older individuals. Similarly, the occurrence of cholecystitis is comparatively higher in females, as ratio of female to male is 3:1 up to the age of 50 and a ratio of approximately 1.5:1 subsequently. The severe abdominal pain patients in right upper quadrant and overall the clinical presentation matched the pain of biliary colic. **Conclusion:** We got a clear idea how to manage patient presenting with different clinical pictures of acute cholecystitis. We can identify risk and co-morbidities relevant to management of Acute Cholecystitis. Thereby we can clearly identify cases of acute cholecystitis in a resource limited setting.

Keywords: Acute cholecystitis, clinical pathological profile, Socio-demographical Data

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Received: 04 November 2020

Revised: 08 December 2020

Accepted: 19 December 2020

Published: 31 December 2020

Introduction

Acute cholecystitis (AC) is a pathological disease which is induced by acute inflammation of gallbladder. It is the most frequent complication of gallstones and represent 10 to 25% of the total surgical interventions concerning the gallbladder ailments, which distress a large part of the world's population.^[1]

It is usually related with the obstruction of the bile duct, but it can develop in a small percentage of patients with no gallstones or duct obstruction. The incidence and severity of this illness is much more higher in patients above 60 years of age, though it can occur in any age group.^[2]

The convicting aspect of acute cholecystitis is biliary stasis overlaid with bacterial infections which may lead to probable ischemia of the bladder wall. In almost 90% to 95% cases, biliary stasis is a precursor which forms the calculous barrier in the cystic duct, in context to which patients are detected with acute lithiasic cholecystitis.^[2]

If the cause of obstruction is different, then the diagnosis changes to non-lithiasic acute cholecystitis. A high risk for development of acalculous cholecystitis is linked with different forms of medical issues, likely burns, trauma, or acute surgical interventions.^[3]

Aims

Study is to assess the socio-demographic and clinical profile of acute cholecystitis cases presenting to the Department of Surgery & Emergency at Santosh medical college and hospital, Ghaziabad.

Objectives

1. To study socio-demographical and clinical profile of diagnosed cases of Acute Cholecystitis.
2. To assess the severity of the diagnosed patient as per standard Tokyo guidelines.
3. To study the management profile in patients of Acute Cholecystitis.

Subjects & Methods

Study Design

The present study is an Observational and Prospective study conducted at Santosh Medical College and Hospital, Ghaziabad (U.P).

Duration of Study

The study was conducted from November 2018 to April 2020.
Study Setting:

The study was carried out among adult patients (18 years and above) being referred to the Emergency department and Surgery Department, SMCH, Ghaziabad (U.P) presenting with Upper Abdominal Pain.

Study Population

A total of 60 adult patients (18 years and above) were recruited in the study. In the present research, presenting complaint of upper abdominal pain was considered for admission.

Patients with a diagnosis of Acute Cholecystitis were then recruited into the study.

Selection of Cases

Inclusion Criteria

1. Young patients (aged 18 years and above) reporting to SMCH, Ghaziabad (U.P) with a chief complaint of upper abdominal pain.
2. All those patients, who were a diagnosed as Acute Cholecystitis.
3. Patients agreeing with signed and informed consent.

Exclusion Criteria

Cases with the following findings were excluded:

- All patients below 18 years.
- Terminally ill patients
- Major bleeding disorder
- Pregnancy
- Cirrhosis with portal hypertension
- Generalized peritonitis
- Suspected gall bladder malignancy
- Choledocholithiasis
- Cholangitis
- Pancreatitis
- Patients not willing to give consent for the study

Results

The age wise distribution of acute cholecystitis patients showed that the age of study subjects was in the range of 22-65 years. The mean age of the study group was 43.47 + 11.99

years (Mean + SD) and SE = 1.55 years [Table 1].

Table 1: Age wise distribution of study subjects (n=60)

N	Mean	SD	SE	Minimum	Maximum
60	43.47	11.995	1.549	22	65

Table 2: Gender distribution of the study sample

Gender	Acute cholecystitis Patients	
	Frequency	Percent (%)
Males	14	23.3
Females	46	76.7
Total	60	100.0

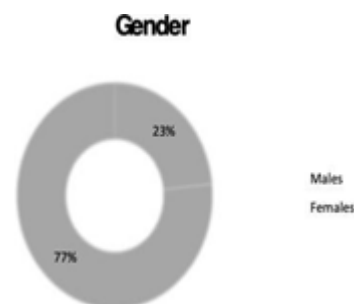


Figure 1: Gender distribution of study participants.

Majority of females were having acute cholecystitis.

It was noted that majority of the patient were chronically constipated and had previous multiple episodes of colicky pain.

Patients were questioned regarding symptoms of the disease and the following data was obtained:

When we checked the clinical signs, majority of the patient presented with pain in right hypochondrium with murphy's sign positive. Majority of the patients had multiple GB calculi. Following Data was obtained:

In pathological studies it was seen that majority of patients presented with high TLC counts and in majority of the cases there was no requirement of surgical intervention.

Early cholecystectomy was done only in 7% cases. Following is a summary of Data obtained after interpretation:

Discussion

The study was observational, prospective, and inferential study conducted among 60 adult patients (18 years and above) being referred to the Emergency department and

Table 3: Symptoms experienced among study population

		Frequency	Percent
Pain	Yes	60	100.0
Fever	No	36	60.0
	Yes	24	40.0
Jaundice	No	60	100.0
Bowel Habit	Normal	11	18.3
	Constipation	45	75.0
	Loose stools	4	6.7
Nausea and Vomiting	No	21	35.0
	Yes	39	65.0

Table 4: Clinical parameters of study population

	Mean	SD	SE	Minimum	Maximum
Pulse	96.33	8.428	1.088	84	116
Temperature	99.480	1.0413	.1344	98.4	101.4
Total Leucocyte Count (TLC)	13763.52	4137.54	534.155	4180	23800
Platelets	2.1885	.83576	.10790	.22	4.07
International Normalized Ratio	1.1357	.10169	.01313	1.01	1.40

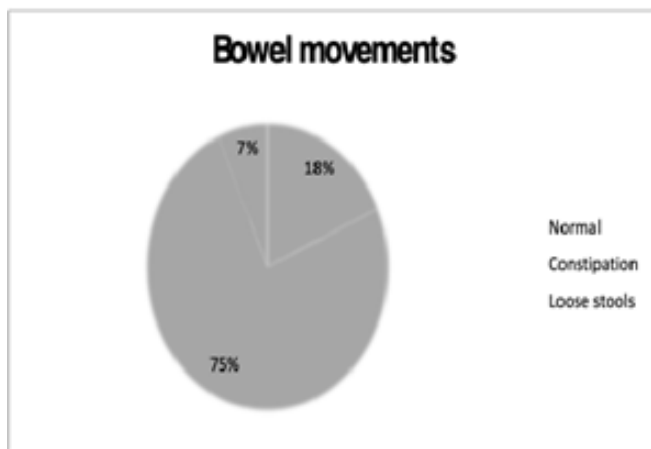


Figure 2: Bowel movements among study participants

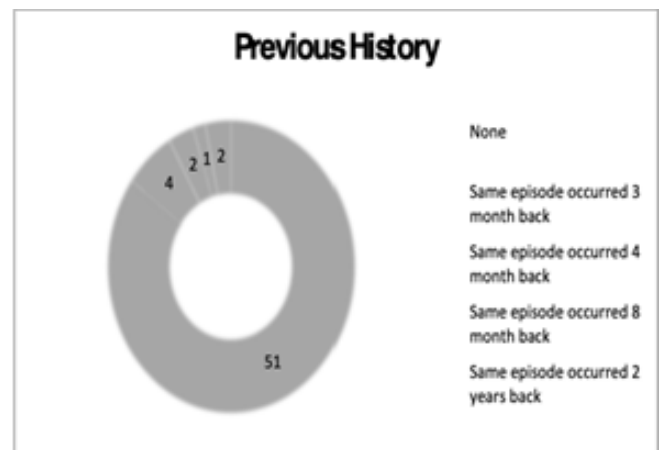


Figure 3: Previous history of symptoms among study participants

Department of Surgery, SMCH, Ghaziabad (U.P) presenting with Upper Abdominal Pain. Patients with a diagnosis of Acute Cholecystitis and voluntarily participating were then recruited into the study.

The details of patient’s particulars, as well as socio-demographic details were recorded by the investigator. The details of the complaint were recorded in a pre-fabricated

case history format. The case history format included chief complaint, and details of duration of illness, along with complications.

Patients were assessed on the basis of clinical symptoms, signs, haematological investigations and ultrasonography findings. First the patient was kept on conservative management with

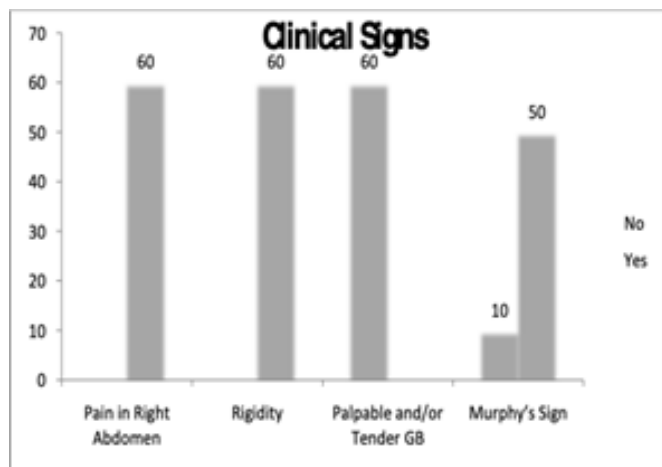


Figure 4: Clinical signs among study subjects

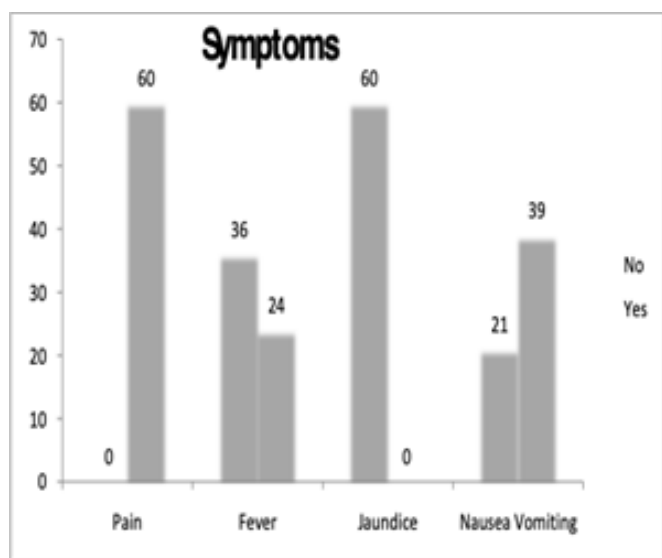


Figure 5: Symptoms among study population

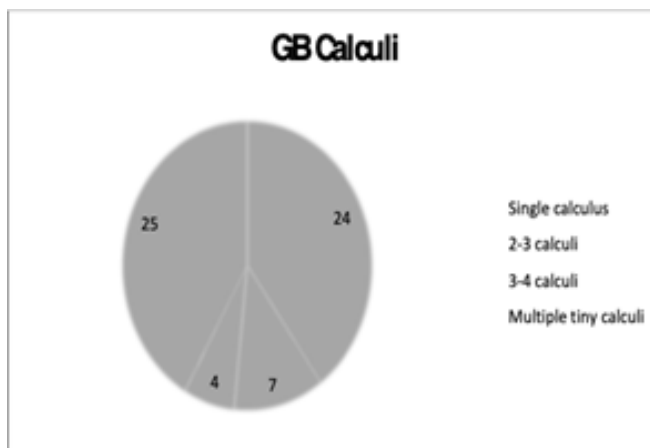


Figure 6: Number and size of GB calculi

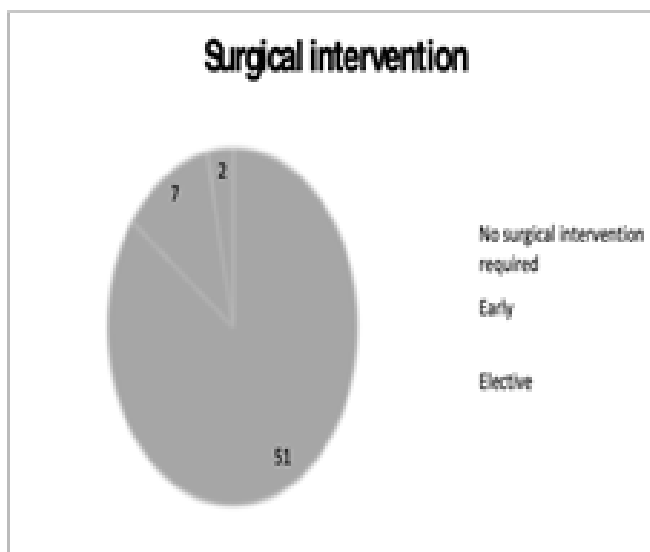


Figure 7: Surgical management among of study participants

fasting, intravenous fluids, antibiotics and analgesia.

Patient responding to conservative management was called for elective cholecystectomy after 4-6 weeks. Patients not responding to conservative management were taken up for surgery as early cholecystectomy.

Acute cholecystitis is one of the common causes of acute abdomen, characterized by inflammation of gall bladder and usually caused by obstruction of cystic duct. About 95% of the patients have calculus cholecystitis. The prevalence of acute cholecystitis varies on the basis of age, sex and ethnic group.^[4]

In the present study, mean age of the study participant was 43.5 (12) years. Evidence suggests that the frequency of gallstones

increases with age, particularly after age 40 to become 4 to 10 times more likely in older individuals.^[5,6]

Conclusion

Acute cholecystitis is one of the common causes of acute abdomen, characterized by inflammation of gall bladder and usually caused by obstruction of cystic duct. Evidence suggests that the frequency of gallstones increases with age, particularly after age 40 to become 4 to 10 times more likely in older individuals. Also, the incidence of cholecystitis is higher in females, with a female to male ratio of 3:1 up to the age of 50 and a ratio of approximately 1.5:1 thereafter.

Pain presented as the commonest symptom, and Murphy's sign became a classical and pathognomic of acute cholecystitis. As evidenced by Ultrasonography, majority of patients had extended gall bladder wall thickness. Nearly half had presence of pericholic cystic fluid. Also, one-third had presence of mild fluid in Morrison's pouch.

The ultrasound can be informative about pericholecystic fluid collection or inflammatory mass in upper right abdominal quadrant. Majority of study population had either a single calculus or had multiple tiny calculi. Leukocytosis is also characteristic of acute cholecystitis. Our study too corroborated with this evidence.

Most patients with acute cholecystitis respond to conservative, first line management: the gallstone disimpacts and falls back into the gall bladder lumen, which helps the cystic duct to empty. Early surgical intervention was required in 11.7% of the study participants. The present study shows that the majority of the study participants had a Grade 1 acute cholecystitis in accordance with Tokyo's guidelines followed by half of the patients with Grade 2. Delayed surgery is based on the belief that affected inflammatory tissue is more vulnerable to surgical interventions and can lead to an increased risk of surgical complications.

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How to cite this article: Gautam A, Bhagat TS, Gupta S. A Clinical Study and Follow up of Cases of Acute Cholecystitis. *Acad. J Surg*. 2020;3(2):70-74.

DOI: dx.doi.org/10.47008/ajs/2020.3.2.18

Source of Support: Nil, **Conflict of Interest:** None declared.