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Original Research Article

Study of Cholecystitis in Adults of Andhra Pradesh Population

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Abstract:

Background: Gall bladder (GB) disease is considered one of the nation's major medical problems. Acute or chronic cholecystitis usually presents an emergency in terms of both diagnostic urgency and therapeutic intervention. Delay in diagnosis further delays therapy, which leads to a life-threatening condition.

Method: 90 adult patients aged between 35 to 65 clinically diagnosed with cholecystitis were carried out by a standard four-port technique for laparoscopic cholecystectomy. The operative time was calculated from the insertion of the first port to the skin closure of the last port. The open cholecystomy was done as and when deemed necessary.

Results: In the clinical manifestations, 90 (100%) had tenderness in the right hypochondrium, 29 (32.2%) had fever, 7 (7.7%) had jaundice, 26.6%) had vomiting, 30 (33.3%) had leucocytosis, 16 (17.7%) patients needed emergency treatment, 74 (82.2%) had elective therapy, 77 (85.5%) had calculous cholecysitis, and 13 (14.4%) had idiopathic calculus. The organisms observed post-surgically were 30 (33.3%) E. coli, and 15 (16.6%) had staph. Auerus, 6 (6.66%) had salmonella, 14 (15.5%) had no organism, and 25 (27.7%) patients had cultured due to early healing.

Conclusion: Early detection and early therapy of cholecystitis will prevent emergency operation morbidity and mortality in patients.

Keywords: Laparoscopic, Open Surgery, G.B. Stones, Cystic Duct, Acute Cholecystitis

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Introduction

Acute cholecystitis is a relatively common clinical entity characterised histopathologically by obstruction of the cystic duct due to oedema, stone, or both. During the early stages of acute cholecystitis, the connective tissue surrounding the gall bladder (GB) is edematous, and hyperacemia is diffuse.

The oedema during this initial stage facilitates the dissection of the structures surrounding the GB. After 72 hours of inflammation, adhesions, hypervascularity, fibrosis, and necrosis develop. These changes prevent adequate visualization of the triangle of calot and thus increase the chances for intra-operative complications. The sequence of these inflammation changes led to the belief in perforating surgery for acute cholecultitis during the first 72 hours of the onset of symptoms [1].

It was concluded that laparoscopic cholecystectomy is a safer, feasible, and valid alternative to open cholecystectomy in patients with acute cholecystitis who underwent successful completion of the laparoscopic procedure [2]. These patients had a shorter hospital stay and a shorter operating time. However, the conversation about open cholecystomies, which can occur in 35% of patients with acute cholecystitis, diminishes the potential medical, cosmetic, and economic advantages of the minimally invasive procedure [3]. Hence, an attempt was made to evaluate the pros and cons of laparoscopic procedures in cholecystectomy.

Material and Methods

90 (ninety) adult patients visited to the Surgery Department of PES Institute of Medical Sciences hospital in Kuppam, Andhra Pradesh, were studied.

Inclusive Criteria: adult patients aged between 35 to 75 years with clinically confirmed cholecystitis who gave written consent for surgery were selected for study.

Exclusion Criteria: Patients unwilling for early operation and having co-morbid conditions like uncontrolled hypertension, diabetes mellitus, hepatic, renal disease, etc., rendering them unfit for surgery on a semi-emergency basis, having choledocholithiasis as on USG, pregnancy, or history of missed periods in premenopausal females, cholangitis, and subsequent histo-

pathological findings of malignancy were excluded from the study.

Method: All the patients with suspected symptoms of cholecysitis were subjected to clinical evaluation. Following appropriate confirmation using different imaging modalities, the patients underwent a laparoscopic procedure as per the hospital's protocol. The relevant socio-demographic details, clinical presentation imaging, laboratory findings, intra-operative findings, and post-operative histopathological findings were recorded in every patient. The duration of the study was from May 2021 to June 2023.

Statistical analysis: Various clinical management modes of presentation types of pathology the organisms cultured post-surgically were classified by percentage. The statistical analysis was carried out using SPSS software. The ratio of males and females was 1:2.

Observation and results

Table1: Clinical Manifestations of the Patients with Cholecystits

A. Clinical presentation: 90 (100%) right hypochondrium cholecystities, 29 (32.2%) had fever, 7 (7.7%) had jaundice, 24 (26.6%) had vomiting, and 30 (33.3%) had leukocytosis.
B. Mode of presentation: (17.7%) had emergency, 74 (82.2%) elective
C. Types of pathology (85.5%) had calculus, and 13 (14.4%) had idiopathic calculus.

Table 2: Study of organism culture post-surgically in patients with cholecystitis 15 (33.3%) E. coli, 15 (16.6%) Staphylococcus aureus, 6 (6.66%) Salmonella, 14 (15.5%) No organism and 25 (27.7%) culture not done due to early healing.

Table 1: Clinical manifestations of the patients with cholecystitis (No of Patients -90)

Sl. No	Clinical Manifestation	No of patients (90)	Percentage (%)
A	Clinical presentations		
1	Right hypochondrial tenderness	90	100
2	Fever	29	32.2
3	Jaundice	07	7.2
4	Vomiting	24	26.6
5	Leukocytosis	30	33.3
B	Mode of presentation		
1	Emergency	16	17.7
2	Elective	74	82.2
C	Types of pathology		
1	Calulous cholecystitis	77	85.5
2	Idiopathic calculus	13	14.4

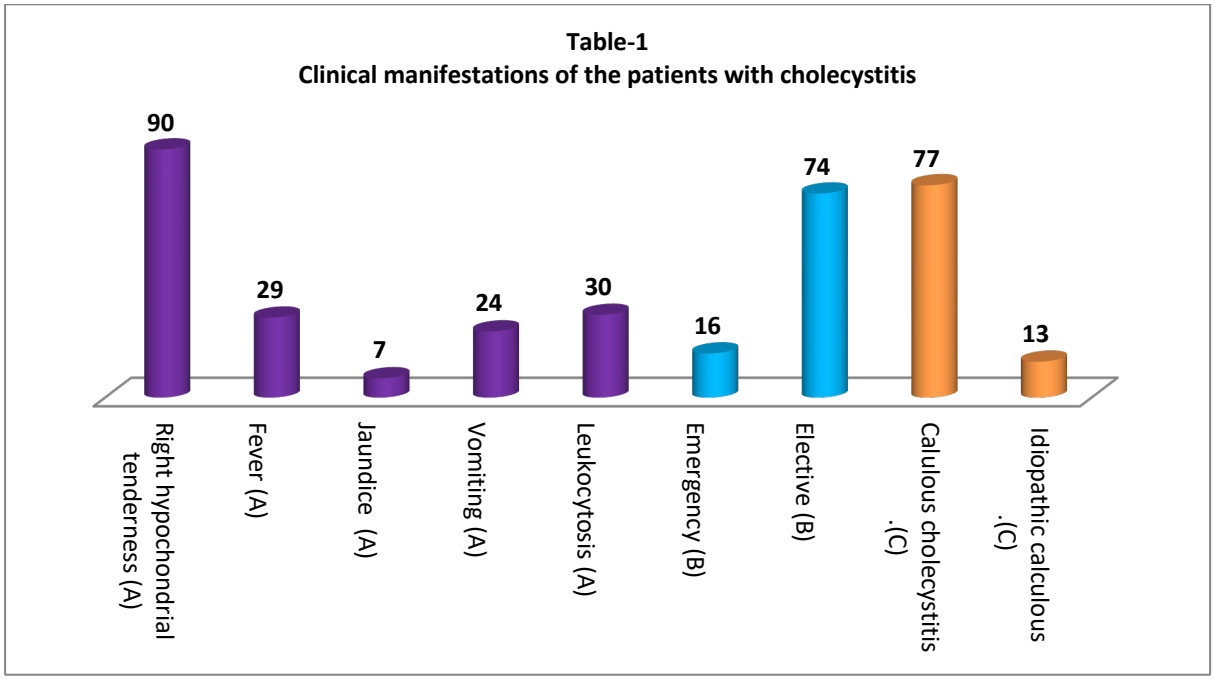

Figure 1: Clinical manifestations of the patients with cholecystitis

Table 2: Study of organism cultured post surgically in the patients with cholecystitis (No of Patients -90)

Sl. No	Cultured Organisms	No of patients	Percentage (%)
1	E. Coli	30	33.3
2	Staph. Aureus	15	16.6
3	Salmonella	06	6.66
4	No organism	14	15.5
5	Culture not done due to early healing	25	27.7

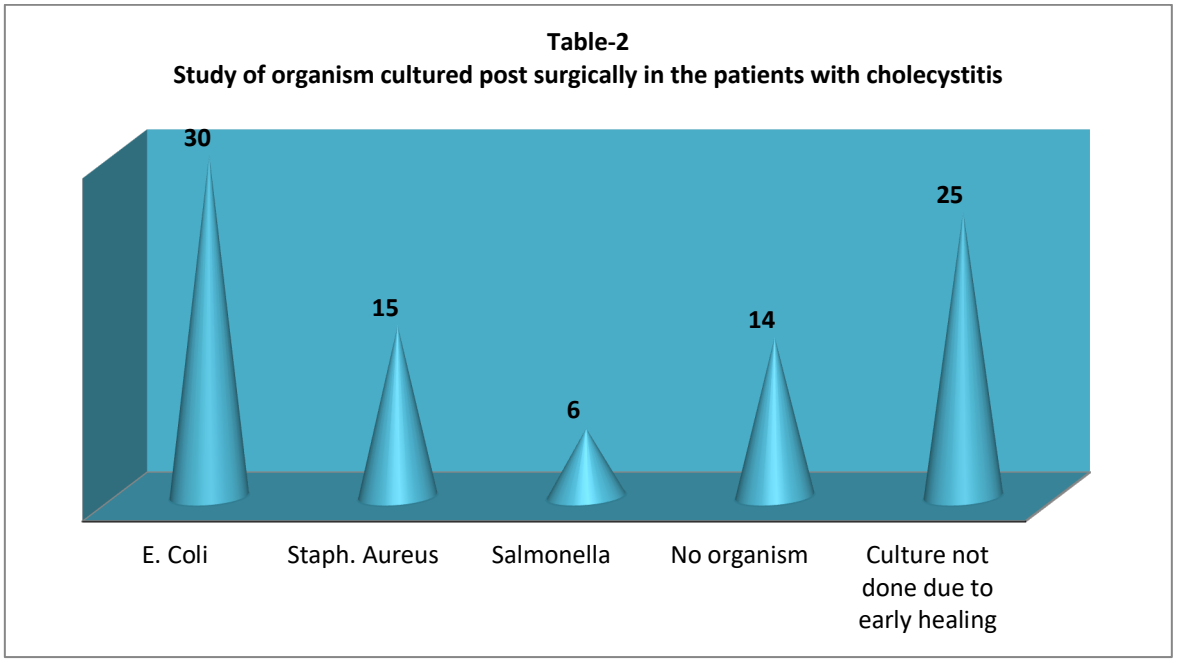

Figure 2: Study of organism cultured post surgically in the patients with cholecystitis

Discussion

Present study of cholecystitis in adult patients in Andhra Pradesh. The clinical manifestations were that 90 (100%) had tenderness in the right hypochodrium, 29 (32.2%) had fever, 7 (7.7%) had jaundice, 24 (26.6%) had vomiting, and 30 (33.3%) had leukocytosis. 16 (17.7%) patients presented emergency, 74 (82.2%) were elective, 77 (85.5%) had calculus cholecystitis, and 13 (14.4%) had idiopathic calulus (Table 1). The organisms cultured post-surgically were 30 (33.3%) E. coli and 15 (16.6%) staph. Aureus, 06 (6.66%) salmonella, 14 (15.5%) no organism, and 25 (27.7%) culture was not done due to early healing (Table 2).

These findings were more or less in agreement with previous studies [5,6,7] A thorough clinical assessment and a high index of suspicion of acute cholecystitis (AC) are essential in any patient who presents with acute right upper quadrant pain and fever.

Other clinical conditions that mimic AC include appendicitis, gastritis, pancreatitis; acute myocardial infarction, right lower lobe pneumonia, and right renal colic, fever, right upper quadrant pain with Murphy's sign is a well-established sign and symptom of AC [8]. Ultrasonography has been used to detect GB stones these days because the echogenic features of AC cannot be differentiated from those in GB stones in chronic cystitis or silent (asymptomatic) GB stones. Gall bladder wall thickening is sometimes used as evidence of AC [9].

However, wall thickening is not specific to AC and is found in patients with hypoalbuminemia, ascitis, 10 to 45% patients with chronic cholecystitis or partially or completely contracted normal gallbladders, and only about 45% of patients with AC [10]. Early laparoscopic surgery was recommended in cholecystitis to prevent wound infection and shorten the stay in the hospital [11]. But there are no differences in morbidity in cases of bile duct injury, bile leakage in open surgery, or LC. Before the introduction of ultrasonography, symptomatic cholecystitis was detected by cholecystography.

Most of the silent stones were found at autopsy, and a few were found by surgeons while doing an abdominal surgical procedure for some other illness. Many surgeons feel that there is no good reason for treating patients with silent stones.

With the ever-increasing frequency of application of abdominal ultrasonography, almost all of the silent GB-Stones can be discovered in vivo, but

ultrasonography does not establish the patency of the cystic duct, the salient histopathological feature of AC.

Summary and Conclusion

The present study of cholecystitis in the Andhra Pradesh population will be useful for surgeons for a proper approach. Clinicians at various levels need to have a good understanding of the varied clinical presentations of acute cholecystitis, silent (chronic) cholecystitis, and different management options, their pros and cons, to be able to treat the conditions effectively. Moreover, this present study demands further histo-pathological, nutritional, environmental, genetic, and embryological studies because the exact mechanism and duration of the formation of GB stones are still unclear.

Limitation of Study: Owing to the tertiary location of the hospital, the limited number of patients, and the lack of the latest instruments, we have limited findings and results.

Research paper was approved by the ethical committee of the PES Institute of Medical Sciences hospital in Kuppam, Andhra Pradesh.

References

1. Gerbail, T. Krishnamurthy- Acute Cholecystitis: The Diagnostic Role for Current Imaging Tests, West, J. Med. 1982; 137: 87–94.
2. Sherman M – Rallis PW Quinn M- Intravenous cholecystography and sonography in acute cholecystis: prospective evaluation AJR. 1980; 135: 311–13.
3. Marchal G J, Casaer M C – Gall bladder wall sonolucency in acute cholecystitis, Radiology 1979, Nov.; 133: 429–433.
4. Gao A M, Eslik G D – Early cholecystectomy is superior to delayed cholecystomy for acute cholecystectomy: a meta-analysis J. Gastrointest. Surg. 2015; 1:848–57.
5. Strans berg. S M – clinical practice of acute calculous cholecystitis, N. Engl. J Med. 2008; 358: 2804–11.
6. Menachem B, Mulluri A, Fohlen – A Delayed laparoscopic cholecystectomy increases the total hospital stay compared to an early laparoscopic cholecystectomy after acute cholecystitis. HPB (Oxford). 2015; 17:857–62
7. Guo-Min Song, Weibian, and Xiao-Tao-Zeng: laparoscopic cholecystectomy for acute cholecystitis, early or delayed medicine, 2016; 95:23 (e.g., 3835).
8. Gomi H, Solomkin JS – TG 13 antimicrobial therapy for acute cholangitis and cholecystitis. J Hepatobiliary Pancre Sci. 2013, 20, 60–70.
9. Lai P B, Kwong K H – Randomized trial of early versus delayed laparoscopic cholecystectomy or acute cholecystectomy, Br. J. Surg. 1998; 85: 764-65.
10. LO CM, Liu CI Fan ST – prospective randomised study of early versus delayed laparoscopic cholecystomy for acute cholecystitis Ann. Surg. 1998; 227: 461–7.
11. Davila D, Manzanares nares C, pischo ML – experience in the treatment of acute cholecystitis via laparoscopy cirugia Espanola 1999; 66(1): 233–36.