

A comparative study of symptomatic and radiologic findings in cases of gall bladder disease undergoing cholecystectomy

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Abstract

A prospective clinical study of 100 selected cases admitted in the Department of General Surgery, M.G.M Medical College and L.S.K. Hospital, Kishanganj during the period of July, 2012 – September, 2014 was undertaken to assess the mode of clinical presentation, laboratory and radiological impressions and finally their management. A brief review of available literature was also made. Majority cases (35%) belonged to age group of 31-40yrs with a female preponderance (F:M- 3:1) with most of the women in their child bearing age. Pain abdomen over the right hypochondrium with referred pain to the inferior angle of scapula and positive Murphy's sign were the commonest clinical presentation followed with nausea, vomiting, flatulence and dyspepsia. Only 1 case had jaundice during the first clinical presentation. Ultrasonography of abdomen not only revealed evidence of gall stones with impressions of acute or chronic cholecystitis in 95% cases but also revealed some changes in common bile duct, liver, pancreas etc. Total WBC count was found to be elevated (mild to moderate) in 100% cases. Liver function test results- 16% cases was with elevated serum bilirubin, 24% cases with elevated alkaline phosphatase and 6% with elevated liver enzymes was observed. All cases were managed conservatively in acute phase of which 20% cases needed early operation being refractory to conservative means. Rest underwent interval cholecystectomy after 4-6 weeks. Open Cholecystectomy through right subcostal Kocher's incision were carried out in all cases out of which Choledocholithotomy and Choledochoduodenostomy were done in 5% cases. 80% cases revealed multiple stones, 14% solitary stone and 3% sludge only. Macroscopically 60% cases showed mixed stones, 22% pigment stones and 6% cholesterol stones. Macroscopically 72% revealed gross thickening with fibrosis, 28% with congestion. Microscopically chronic cholecystitis was found in 100% cases. Bacteriological examination of gall bladder contents showed 56% to be sterile, Klebsiella sp. And Staphylococcus aureus predominant in infected cases (42%). E. coli, Enterococcus, Enterobacter were also detected. The post operative period of all cases were uneventful except pain abdomen and wound sepsis in few. There was no mortality and significant morbidity.

Keyword: Acute cholecystitis, Chronic cholecystitis, Gall bladder disease.

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INTRODUCTION

Gallbladder pathologies are very common condition in this part of the country³. Patients commonly present with sudden onset pain, located mainly in the right

hypochondrium, dyspepsia, nausea, vomiting and fever. Tenderness and rigidity are usually located in the right hypochondrium. A mass in the right hypochondrium and jaundice are often the clinical features³. Radiological findings, mainly Ultrasonography, form the mainstay in the confirmatory diagnosis of acute cholecystitis. Sonographic features include thickened gallbladder wall, pericholecystic collection and calculi or sludge². The use of ultrasonography (USG) as a diagnostic aid for the Visualization of the gall bladder was first suggested by Hublict in 1972; since then, it has been used with increased frequency and confidence by radiologists². 10% of the adult patients have asymptomatic gall stones³. The present series is a clinical study of acute cholecystitis with a view to study the incidence of the disease with reference to age and sex and to study the various clinical

presentations. It also aims to evaluate the ultrasonography findings and to correlate them with the clinical findings. Lastly it aims to evaluate the treatment modalities with the facilities available here at M.G.M Medical College and L.S.K Hospital, Kishanganj.

MATERIALS AND METHODS

The cases were selected from the patients admitted in the 3 surgical units of M.G.M Medical College and L.S.K Hospital, Kishanganj, Bihar from the month of July, 2012 to September, 2014 suspected of having gall bladder pathology. All the cases were clinically examined and had Radiological investigation in support before undergoing surgery. Chronic duodenal ulcer, chronic gastric ulcer, recurrent appendicitis, lump in the ascending and transverse colon, kidney and pylorus were excluded from

the Case study. Data were analyzed through standard Statistical technique.

OBSERVATIONS AND DISCUSSION

The present study comprising of 100 cases of gall bladder pathologies has been carried out personally under professional guidance during the period July 2012-Sept 2014 in the three units of Dept of Surgery, M.G.M Medical College and L.S.K Hospital, Kishanganj. The cases have been studied as regards to age, sex, symptomatology, investigations, treatment and pre and post operative complications. The diagnosis of common gall bladder conditions was made in the basis of history, clinical examination and ultrasonographic findings.

Table 1: Showing the incidence of the disease in different age groups

Series	11-<20 years	20-<30 years	30-<40 years	40-<50 years	50-<60 years	60 years above
Littler <i>et al</i> , 1952 (100 cases) (9)	2 (2%)	2 (2%)	20 (20%)	28 (28%)	28 (28%)	20 (20%)
Schweiz <i>et al</i> , 1994 (200 cases) (3)	8 (4%)	10 (5%)	32 (16%)	48 (24%)	54 (27%)	30 (15%)
Present series, 2013(100 cases)	1(1%)	12 (12%)	38 (38%)	36 (24%)	10 (10%)	3 (3%)

In Present series the highest incidence were observed in the 3rd and 4th decade of life.

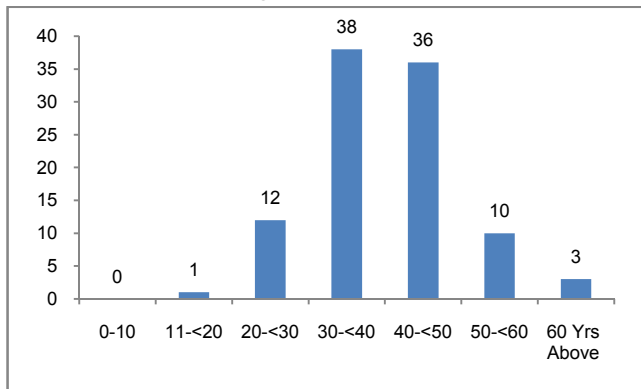


Figure 1: Showing Age Incidence

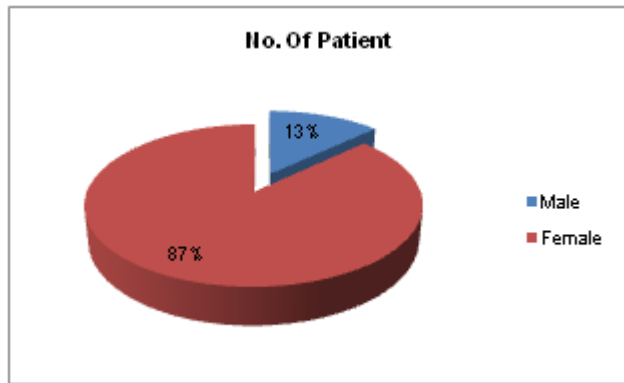


Figure 2: Showing distribution of patient according to sex

Table 2: Showing the sex incidence in different series including the present series. The Present study the disease is predominant in the female, out of 100 cases, 74 were female and 26 were male

Series	Total No. of cases	Female	Male	Ratio F:M
Kala <i>et al</i> (1977) (8)	100	84	16	5:2
Indar AA <i>et al</i> (2002) (7)	100	75	25	3:1
Ali Nawaz Khan (2006) (6)	100	76	24	3:1
Present series (2013)	100	74	26	3:1

The majority of the workers recorded a higher incidence of the disease in female. The female to male ratio is 3:1 which is almost similar to the findings of other workers.

Table 3: Symptomatology Showing the presenting symptoms of acute cholecystitis in different series

Series	Pain Abdomen (%)	Nausea and Vomiting (%)	Dyspepsia (%)	Fever (%)	Jaundice (%)
Littler <i>et al</i> (1952) (9)	70	58	56	16.2	24
Colcock and McMannus (1954) (4)	87.3	48.7	46	12.1	18.8
Dowdy (1969) (5)	89	50	48	19.5	5.5
Kala <i>et al</i> (1977) (8)	97	84	37	10	17
Ali Nawaz Khan (2008) (6)	70	68	52	18	20
Present series of 2013	81	60	30	55	1

Out of 100 cases 81 cases presented with pain abdomen, 60 cases with history of nausea and vomiting, 30 cases with abdomen fullness, 55 cases of fever and 1 case of jaundice

Table 4: Symptomatology

Symptom	No. of Patient
Nausea	60
Fever	55
Jaundice	1
Dyspepsia	30

Table 5: Investigations

Laboratory	Parameters	Number of patients	(%) percentage
Hb%	Normal	82	82
	Low	18	18
TC	Normal	10	10
	Elevated	90	90
DLC	Normal	92	92
	Raised eosinophil	8	8
ESR	Normal	84	84
	Raised	16	16
BT, CT	Normal	100	100
	Prolonged	0	0
T. Bilirubin and fraction	Normal	84	84
	Raised	16	16
T. protein and fraction	Normal	100	100
	Low	0	0
S. Alkaline Phosphatase	Normal	76	76
	Raised	24	24
SGOT and SGPT	Normal	94	94
	Raised	6	6
S. cholesterol	Normal	80	80
	Raised	20	20
RBS	Normal	92	92
	Raised	8	8
S. creatinine	Normal	100	100
	Raised	0	0
PT	Normal	100	100
	Prolonged	0	0

Table 6: Showing the USG findings

USG findings	Number of patients	Percentage (%)
Echoreflexive calculus with acoustic shadowing	100	100
A.P. diameter at fundus (>3 cm)	54	54
GB wall thickness (>3)	51	51
Sonolucent layer	50	50
Sonographic positive Murphy's sign	43	43

Table 7: Types of operation

Mucocele GB	8
Empyema GB	20
Contracted GB	25
Normal looking GB with stones	18
Stones in CBD with dilatation	1
Types of operation	
Lap cholecystectomy	50
Open cholecystectomy	50

CONCLUSION

Gallbladder pathologies are very common condition in this part of the country³. Of these acute and chroniccalculouscholecystitis is seen commonly. Females in their reproductive period of life are more susceptible to gall stones disease. In the present series, the highest age incidence was seen in the 3rd and 4th decades of life. Gall bladder carcinoma was found in few cases on contrary to the ultrasonographic findings along with few cases of stone in common bile duct. No definite association of the disease has been found with regards to occupation, obesity, weight, family history or blood group. Clinically pain with tenderness and rigidity in the right hypochondriac region was seen in all patients, followed by nausea, vomiting, dyspepsia, fever, jaundice and abdominal lump in the decreasing order of frequency. Ultrasonography of abdomen was the mainstay in the confirmatory diagnosis of gall bladder pathologies and the findings correlated well with the clinical findings in almost all the cases. Some cases were subjected to conservative treatment and were closely monitored for signs of improvement. Patients responding to conservative treatment were recalled after an interval of 4-6 weeks for cholecystectomy, while those patients who did not respond were subjected to emergency cholecystectomy. There were no major intra operative or post operative complications following interval cholecystectomy. In our study, 100 cases of gall bladder

disease were analyzed clinically and radiologically - ultrasonography, out of which 95% of the ultrasonography reports matched with the operative findings.

REFERENCE

1. A Cuschieri, L.H. Blumgart and .Y. Fong. Acute Calculous Cholecystitis, Timing of Surgery; Surgery of the Liver and Biliary tract. 2000; 3(1): 665-67
2. Anil kumar Sakalecha, D.B. Udoshi. To evaluate the role of real time, gray scale B-mode ultrasonography in patients of acute cholecystitis. A cross sectional study. Jawaharlal Nehru Medical College, Belgaum, 2001
3. Bhanasali SK cholecystitis and cholecystitis (an appraisal of clinico-surgical experiences with 228 cases). J Postgrad Med (serial online) 1980 (cited 2005 June 23); 26,74
4. Colcock, P. and Mc Mannus, E. (1955); Surg. Gynaec. Obst. 101-161.
5. Dowdy, G.S. Jr. 91969); 'The Biliary Tract' Lea and Febiger.
6. eMedicine – cholecystitis, Acute: Article by Ali Nawaz khan, MBBS, FRCP, FRCR, Consultant Radiologist, Dept. of Diagnostic Radiology, Noth Manchester General Hospital, July 26,2006. WW.emedicine.Com/Radio/topic 158.htm.
7. Indar AA et al, BMJ 2002; 325:639-643 (21 Sept).
8. Kala ZS, Wani NA, Matoo G.M. MisgerMs and Rasid PA, 1977, In J. Surg. 33:530-32.
9. Litler TR, Ellis GR, 1952, Brit J. Surg. 68: 753-57.

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