ORIGINAL RESEARCH PAPER VOLUME-6 | ISSUE-8 | AUGUST - 2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

PATTERN OF PRESENTATION OF BILIARY TRACT CALCULI

General Surgery

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ABSTRACT

AIMS AND OBJECTIVES: The aim of the study is to analyse the pattern of clinical presentation of biliary tract calculi and its complications.**MATERIAL AND METHODS**: All patients with radiological evidence of biliary calculus or its complications, in Mahatma Gandhi Medical College & Research Institute between April 2014 and March 2016 were included in the study. Each patient was subjected to methodical physical examination to assess the general condition and to know the basic vital data on admission. Per abdomen examination was done according to standard protocol in a methodical way and findings documented. The decision made and the outcome at discharge was tabulated. Data was analyzed with descriptive statistics. **RESULTS:** Mean age was 45.42 years, with 50.31 for males and 43.84 for females. Majority of patients were 30-50 years of age. 94% of cases presented with pain abdomen. Biliary dyspepsia was seen in 74% of cases. Flatulent dyspepsia was present only in 14 of these cases. Cholecystitis was the commonest diagnosis made in 63% of cases, followed by acid peptic disease in 19% of cases. Two mortalities were in patients with acute biliary pancreatitis.**CONCLUSION:** The age incidence was found to be highest between 30 and 50 years, with an average age 45 years. The incidence of cholelithiasis was more in females. Almost all patients present with pain abdomen. Majority of the patients had tenderness in right hypochondrium. Palpable gallbladder is not always malignancy. Ultrasonogram is the imaging modality of choice. Acute pancreatitis is a highly morbid and mortal complication. Open cholecystectomy is the treatment of choice for cholelithiasis in our setup. Chronic cholecystitis is the commonest histopathology. Asymptomatic gallstones can be left untreated with strict follow up. Mixed stones are the predominant stones.

KEYWORDS:

1 INTRODUCTION

Biliary calculi and its complications have been on the rise in and around the rural population of Pillayarkuppam, seeking professional health care in our hospital.

Biliary calculi, promptly diagnosed and treated appropriately prevent a great deal of highly morbid and potentially lethal complications that may ensue.[1] Assessment and treatment of biliary calculi early in the course of natural history of the disease may prove to be cost effective than the treatment of complications[2], thus mandating the need for the study.

2 AIMS AND OBJECTIVES

The aim of the study is to evaluate sonoelastography as a non-invasive investigating tool for thyroid nodular diseases.

3 MATERIALS AND METHODS

All patients presenting with acute abdomen with high degree of suspicion for biliary calculi were investigated with abdominal sonogram. Patients with sonological evidence of biliary calculi were included in the study.

With each patient being admitted with clinical suspicion of biliary calculi, a cordial interrogation session was held to obtain the clinical particulars regarding the disease. A detailed history was carefully elicited with particular attention to hepato-biliary system.

Depending on the severity of the symptoms and signs and the findings on sonogram, they were considered for appropriate treatment. All patients admitted with acute onset of pain, guarding, rigidity and obstructive symptoms were first managed conservatively in the form of intra venous fluids, nil by mouth regime, Ryle's tube aspiration, intra venous antibiotics and analgesics. In those patients where medical line of management failed, need for intervention considered.

The patterns of presentation along with the treatment modalities utilized were studied with interest.

Data was analyzed with descriptive statistics.

4 RESULTS

The youngest patient was 12 years old and the oldest patient was 90 years old. The average age group was 40 – 50 years old. Bulk of the disease presented in the 30 – 50 years age group. In this study, 26% were males and 74% were females, showing female preponderance in sex distribution of biliary calculi. Females outnumbered males in the ratio of 2.84:1.

Clinical Presentation

Imaging	Symptoms and Signs						
	Pain	Jaundice	Dyspepsia	Fever	Icterus	Tender RHC	Mass RHC
CDL	1	1	-	-	1	1	-
CL	70	-	57	8	1	61	2
CL+EC	1	-	1	1	-	1	-
CL+EMC	2	1	2	1	-	2	1
CL+CaG	1	1	1	1	1	1	1
CL+MIS	1	1	1	1	-	1	-
CL+CDL	7	5	3	5	6	6	2
CL+AP	8	1	6	7	2	8	-
CL+CP	1	-	1	1	-	-	-
CL+GSI	1	-	1	-	-	1	-
CL+AA	1	-	1	1	-	1	-
CL+NL	-	-	-	-	-	-	-
CL+PA	-	-	-	-	-	-	-
Total	94	10	74	26	11	83	6

Pain was the most common presenting symptom whereas tenderness in right hypochondrium was the most commonly elicited sign. Pain was present in 95% of cases. In 76 cases pain was in right upper quadrant and in 19 patients, pain was in epigastric region. Predominantly, the pain was colicky and intermittent, or pricking and continuous in nature. Pain was of acute onset in 14 patients.

Jaundice was present in 10% of cases out of which 6 were associated with choledocholithiasis. All the patients with jaundice had associated high coloured urine and pale stools though pruritis was seen only in 1 patient.

74% of cases presented with dyspepsia. Dyspepsia was the second most common symptom. The typical history of flatulent dyspepsia was present only in 14 of these cases.

Clinical Diagnosis Vs Imaging

Imaging	Clinical Diagnosis												
		AC	AP	APD	C	CDL	CH	CaG	CaP	EMC	IO	MG	PLA
CDL	-	-	-	-	-	1	-	-	-	-	-	-	-
CL	-	10	-	18	45	-	-	-	-	-	-	1	-
CL+EC	-	1	-	-	-	-	-	-	-	-	-	-	-
CL+EMC	-	1	-	-	-	-	-	-	-	1	-	-	-
CL+CaG	-	-	-	-	-	-	-	1	-	-	-	-	-

CL+MIS	-	-	-	-	-	1	-	-	-	-	-	-	-
CL+CDL	-	-	-	-	1	5	-	-	1	-	-	-	-
CL+AP	-	3	3	1	-	-	1	-	-	-	-	-	-
CL+CP	-	-	-	-	-	-	-	-	-	-	-	-	1
CL+GSI	-	-	-	-	-	-	-	-	-	-	1	-	-
CL+AA	1	-	-	-	-	-	-	-	-	-	-	-	-
CL+NL	-	-	-	-	1	-	-	-	-	-	-	-	-
CL+PA	-	-	-	-	1	-	-	-	-	-	-	-	-
Total (n=100)	1	15	3	19	48	7	1	1	1	1	1	1	1

Cholecystitis was the commonest clinical diagnosis made. It accounted for 48% of the clinical diagnosis. Dyspeptic presentation was second only to cholecystitis, 1 case masking acute pancreatitis. Choledocholithiasis was the diagnosis in 7 patients, out of which 6 had choledocholithiasis and 1 case of Mirizzi's syndrome. 1 patient suspected of having carcinoma of the pancreas infact had choledocholithiasis.

Treatment

Imaging	Type of treatment					
	Conservative	Cholecystectomy	Choledochotomy	T - Tube	Other therapy	
		OC	LC			
CDL	-	-	-	-	-	1-ESR
CL	15	5	54	-	-	-
CL+EC	-	1	-	-	-	-
CL+EMC	-	2	-	-	-	-
CL+CaG	1	-	-	-	-	1-RT
CL+MIS	-	1	-	1	1	-
CL+CDL	-	6	-	6	6	1-CD
CL+AP	7	1	-	-	-	-
CL+CP	-	-	-	-	-	1-CB
CL+GSI	-	1	-	-	-	1-E
CL+AA	-	1	-	-	-	1-APP
CL+NL	-	1	-	-	-	1-PL
CL+PA	-	-	-	-	-	1-I&D
Total (n=100)	23	19	54	7	7	9

Common bile duct stones were managed with cholecystectomy and common bile duct exploration with insertion of a T-tube, including a patient with grade II Mirizzi's syndrome. On-table T-tube cholangiogram was done in 6 out of 7 patients. Choledochoduodenostomy was done in 1 patient. Laparoscopic CBD exploration was not attempted. Endoscopic stone retrieval was done in 2 patients, 1 patient with isolated single choledocholith. Endoscopic sphincterotomy was done in both the patients. Advanced carcinoma of the gallbladder was treated with external beam radiotherapy in 1 patient.

5 DISCUSSION

Mean age group in our study was 45.52 years. Pain was the commonest symptom of biliary calculi universally as evidenced by our study in comparison with the studies from the east and west of Atlantic, present in more than 90% of patients and in 100% in Keddie et al & Konsten J et al's study. Pain is due to either luminal obstruction from an impacted stone which is characteristically colicky or from inflammation which is burning type of pain. Biliary dyspepsia was next only to pain in presentation, being present in upto 50 to 75% of patients, being present more in the subcontinent than the developed as shown by our study. Jaundice brought the patients to hospital in as high as 10% of cases in 2 studies including our study. Almost all the cases had associated high coloured urine and clay coloured stools, typical history of biliary obstruction. [3,4]

Tenderness was present in as high as 4 out of 5 patients in our study and a study by Gosh SK et al. 3 out of 5 patients had tenderness in Wani et al study. Tenderness is usually due to acute inflammation. 1 in every 4 to 5 patients had fever in our study and a study by Gosh et al. Patients with septic foci in the biliary tree (acute cholecystitis, cholangitis), pancreas, liver, and appendix usually presented with fever. Mass in the right hypochondrium is due to an acute cholecystitic phlegmon, mucocoele of gallbladder, empyema of gallbladder, carcinoma gallbladder or an exception to Courvoisier's law. 4 – 6% of patients with biliary calculi presented with a mass in the right hypochondrium. [5,6]

Pick up rate of abdominal ultrasonogram was 100% with respect to biliary calculi in our study and a study by Kapoor BS et al. [7]

73 out of 100 patients studied in our study were operated upon. Cholecystectomy alone was done in 86.30% of cases in our study, a little higher than the De Almedia sereies (73.01%). Laparoscopic cholecystectomy was the norm in our study as compared with a series by Attwood SEA et al. 74% of patients underwent laparoscopic cholecystectomy in our study and 54% of patients underwent laparoscopic cholecystectomy in Attwood SEA et al series. 10.96% (8 cases) of our cases underwent retrograde cholecystectomy by fundus first method, out of which 4 were emergency cholecystectomies. Cholecystectomy with CBD exploration was undertaken in 6 cases (8.22%) almost one third of what is seen in De Almedia series. In all 6 patients t-tube cholangiogram was done and 5 patients demonstrated stones in the CBD with 1 patient showing grade II Mirizzi's syndrome. Cholecystectomy with choledochoduodenostomy was done in 1 patient. [8,9]

6 CONCLUSION

The age incidence was found to be highest between 30 and 50 years, with an average age 45 years. The incidence of cholelithiasis was more in females. Almost all patients present with pain abdomen. Majority of the patients had tenderness in right hypochondrium. Chronic cholecystitis is the most common mode of presentation. Palpable gallbladder is not always malignancy. Ultrasonogram is the imaging modality of choice. Chronic cholecystitis is the commonest histopathology. Asymptomatic gallstones can be left untreated with strict follow up.

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