

# Ultrasonic Evaluation of Cholelithiasis

ASIM RAHIM<sup>1</sup>, SUNDAS SARDAR<sup>2</sup>, MUSTAFA ALI SIDDIQUI<sup>3</sup>, MOHAMMAD MOHSIN KHAN<sup>4</sup>

## ABSTRACT

**Background:-** This study observed following optional cholecystectomy for symptomatic gallstone disease with defined warning for surgery. Cholelithiasis engrossed the occurrence of gallstones.

**Aim:** To evaluate the role of ultrasound for detection and location of gall stones.

**Methods:-** In the present study, 50 cases were employed from cholelithiasis & some acute cholecystitis patients (proven by sonography) admitted in the Radiological department of MMDC Multan, from April, 2018 to July, 2018. The clinical appearances were observed from the records. Age and sex matched patients (n= 50 ) admitted for clinical features of cholelithiasis and ultrasonic scans were made.

**Results:** Female have elevated incidence of Cholelithiasis. Elderly are extra vulnerable than young.

**Conclusions:-** Cholelithiasis is common in females and aged males. Important forecaster were more fatty, lack of physical activity; thus in lieu of high risk lifestyles for primary prevention.

**Keywords:** Common bile duct, Cystic duct, Inferior vena cava.

## INTRODUCTION

The gallbladder is a pear shaped sac like organ with a muscular wall<sup>1</sup>. Gallstones generally asymptomatic and typically exposed during a surgical procedure for an unrelated condition or during autopsy. Patients with severe cases may develop gallstone pancreatitis, gallbladder perforation, or other gallbladder diseases<sup>2</sup>.

The gallbladder is capable to discharge bile into the intestine when it is required. Gallstone disease is relatively clear-cut to treat. The main generally used management is surgery, to remove the gallbladder<sup>3-5</sup>.

Cholelithiasis is often symptoms less. Cholelithiasis is found on ultrasound done for other reasons. Symptoms less Cholelithiasis not needed to be managed and initial signs are mild and there are dangers in cholecystectomy<sup>6-8</sup>.

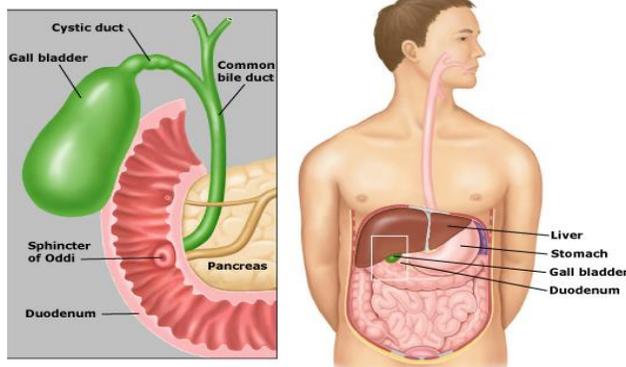
position. High resolution Ultrasound machine Madison and Toshiba were used. The gallbladder be scanned from both a sub costal and intercostals approach.

When scanning from a sub costal view a deep inspiration were usually allow better visualization. Scans should routinely be obtained with the patient in the variety of positions (left posterior oblique, left in the supine position using a3-:lateral decubitus, prone, upright).

Data collected for the examined fifty patients, were be stored in personal computer, data collection sheets and ultrasound images were protected. As this research follow scientific methods related information were taken from books internet, scientific magazines, data collecting sheets and lectures, and the references were given of each chapter and detail were published.

Collected data were refined by making statistical record. Permission of the Ultrasound to use the patient data and research were done in MMDC Multan.

Fig. 1:



## RESULTS

Maximum patient age was 65 year & minimum patient age were 25. Their range is 50 & the mean is 38.960±10.07043 (Table I). In the study 50 patients were scanned from which 30 were female & 20 were male (Table-II). From 50 patients, in two patients, gallbladder stones were absent, in 8 patients stones were present in gallbladder neck, in 33 patient's stones were in gallbladder lumen & in 7 patients stones were in gallbladder fundus( Table-III, IV). In 13 patients there were only single stone, in 35 patients, stones were more than one found.

## MATERIAL AND METHOD

High frequency ultrasound with multi frequency transducer 2-5 Mhz. were used for assessing the correlation between cholelithiasis and acute cholecystitis with patient supine

<sup>1</sup>Associate Professor Radiology Department Multan Medical & Dental College Multan

<sup>2</sup>PGR Diagnostic Radiology , Department of Radiology Nishtar Medical University Multan

<sup>3</sup>Associate Professor Radiology, CPEIC Multan

<sup>4</sup> Professor of Community Medicine AIMCS

Correspondence to Dr. Asim Rahim

Table-I: Age of patients

N	50
Assortment	55
Least	25
Highest	65
Imply	38.960
	1,207
Difference	11.070

Table-II: Gender of patients

Sex	n	%age
Male	20	40.0
Female	30	60.0

Table III

Frequency	n	%age
Stone - No	02	04.0
Stone -Yes	48	96.0

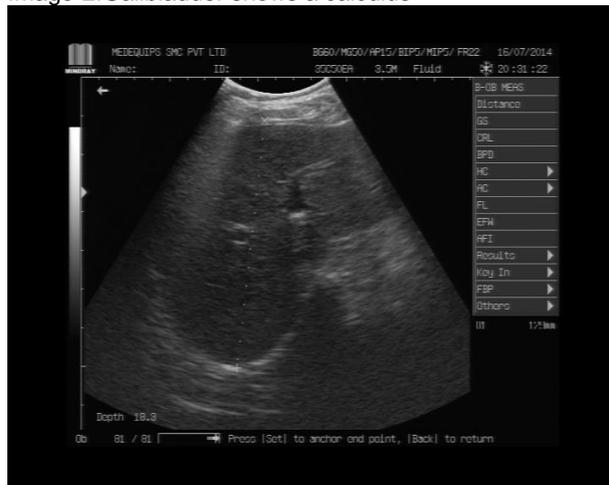
Table-IV: Location of stones

Frequency	n	%age
No stone	02	04.0
At neck	8	16.0
Gb lumen	33	66.0
Fundus	7	14

Image-1:Thick walled gallbladder (inflammation of gallbladder ) acute cholecystitis



Image-2:Gallbladder shows a calculus



**DISCUSSIONS**

Gallstones are frequently widespread in females and elderly males, a lot of cases being asymptomatic. Elevated ingestion of sugar and small vegetable protein support

gallstone formation. Utilization of extreme saturated fats joined with less physical activity and elevated waist hip ratio were the most significant predictors. In this study, age and sex falls short of scrutinized each of the variables alone in both genders. However, another separate study needed to identify the extra predictors of cholelithiasis, especially for asymptomatic disease.

**CONCLUSION**

Gallstone diseases are most common disease. Most cases of gallstones are asymptomatic. Gallstone disease is common among females and elderly males. Important forecaster variables were more fatty, lack of physical activity; thus in lieu of high risk lifestyles for primary prevention. Surgery is only the best choice for management of gall stones. Health promotion for health life styles and health life practices play important role for prevention of gall stones.

**RECOMMENDATIONS**

Ultrasound is the modality of choice for detection of gallbladder stones, assessment of acute RUQ pain and for the initial evaluation of patients with jaundice or elevated liver function tests & complex biliary problems, such as diagnosis and staging of the hilarcholangiocarcinoma. There is no other anatomic location in the body that is better studied with sonography than the biliary tree.

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