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RESEARCH ARTICLE

CLINICAL PRESENTATIONS OF GALL STONE

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ABSTRACT

Background: Gallstone disease is one of the most common problems affecting the gastrointestinal tract and the most common biliary pathology, gallstone induced complications have a limited and overlapping pattern of clinical presentations

Objective: To evaluate the modalities of clinical presentations of gallstone disease with its incidence among different age groups with their management and outcome.

Methods: This study was conducted on a total of (53) adult patients including (48) female (90.5%) and (5) male (9.5%) patients with gallstone disease with their age ranging from 18 to 73 years who were presented to Al- Yarmouk teaching hospital from the period between April 2014 to April 2015, they were divided according to their clinical presentations into two main groups as cold cases group and emergency cases group, within each group a different clinical sub groups were included.

Results: Among the (53) adult patients included in the study (10) different clinical presentations of gallstone disease were identified, four of them who included (37) patient (19.6%) belong to the cold cases group and six of them who included (16) patients (8.4%) belong to the emergency cases group. Within the cold cases group (4) different clinical subgroups of presentations were identified including symptomatic gallstones, chronic cholecystitis, jaundice, incidental gallstones and within the emergency cases group six different clinical subgroups of presentations including acute cholecystitis, acute biliary pancreatitis, cholangitis, abdominal mass, acute abdomen, intestinal obstruction, all the included patients underwent cholecystectomy either as elective or emergency surgery.

Conclusion: Gallstone disease is common and has a wide spectrum of different clinical presentations from silent and asymptomatic to severe life threatening. Among the (10) different clinical presentations of gallstone disease who were encountered six of them were emergency ones, the presentations of gallstone disease as a cold cases outway that as an emergency cases. The highest presenting age group in cold cases group was between 31-40 years and the lowest age group was between 10-20 years, while the highest presenting age group in emergency cases group was between 51-60 years and the lowest presenting age group was between 10-20 years. The highest clinical presentation in cold cases group was chronic cholecystitis while the highest clinical presentation in emergency cases group was acute cholecystitis. The incidence of emergency presentations of gallstone disease is higher in elderly patients than in young age groups.

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INTRODUCTION

Gallstone disease is one of the most common problems affecting the digestive tract and the most common biliary pathology and a major cause of morbidity worldwide, cholecystectomy is the most commonly performed abdominal surgery. Gallstone induced complications have a limited and overlapping pattern of clinical presentations. It was estimated that 10-15% of the adult population in USA had gallstones and the vast majority of subjects (more than 85%) are asymptomatic and between 1-4% of them will develop biliary

symptoms annually. The prevalence of gallstones is related to many factors including age, gender and ethnic background, certain conditions might predispose to the development of gallstones including pregnancy, obesity, dietary factors, Crohn's disease, terminal ileal resection, gastric surgery hereditary spherocytosis, sickle cell disease and thalassemia are all associated with increased risk of developing gallstones. Women are three times more likely to develop gallstones than men and first degree relatives of patients with gallstones have a twofold greater prevalence. Most patients only have stones in the gallbladder, but in 10-15% the stones may migrate into the common bile duct, gallstones found in gallbladder are classified as cholesterol, pigmented or mixed stones based on their chemical composition, up to 90% of gallstones are

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cholesterol or mixed gallstones, the remaining 10% of gallstones are pigmented stones which have less than 20% cholesterol. The basic mechanism underlying the formation of gallstones is supersaturation with constituent in bile exceeding their maximum solubility.

Aim of study

To evaluate the modalities of clinical presentations of gallstone disease with its incidence among different age groups with their management and outcome.

Patients & methods

The study was conducted on a total of (53) adult patients with gallstone disease presented to AL –Yarmouk teaching hospital over one year period. they included (5) male patients (9.5%) & (48) female patients (90.5%) with their age ranging from 18 to 73 years, they were divided into two groups as:-

A. Cold cases group

It included (37) patients (19.6%) who were presented to the outpatient department with the following clinical presentations

1. Symptomatic gallstones --- (10) patients
2. Chronic calculous cholecystitis ---(17) patients
3. Jaundice ----(7) patients
4. Incidental gallstones -----(3) patients

Among the 37 patients in this group 22 patients were managed as outpatient cases and prepared for elective cholecystectomy, while 15 patients of this group needed preoperative hospital admission for further evaluation who included 2 patients with symptomatic gallstones, 5 patients with chronic cholecystitis, all jaundiced patients, 1 patient with incidental gallstone. They underwent detailed history and through examination with full investigation workup including lab and radiological studies. All the patients of the cold cases group underwent elective cholecystectomy

B. Emergency cases group

Included (16) patients (8.4%) who were presented to the emergency surgical department, within this group six different clinical subgroups were included as

1. Acute calculous cholecystitis ----(6) patients
2. Acute biliary pancreatitis ----(5) patients
3. Cholangitis ----(2) patients
4. Abdominal mass --- (1) patient
5. Acute abdomen ----(1) patient
6. Intestinal obstruction -----(1) patients

All the patients of this group were admitted to the hospital & underwent cholecystectomy in (9) of them as elective and as emergency surgery in (7) of them.

RESULTS

Among the (53) adult patients included in the study (10) different clinical presentations of gallstones disease were identified, (4) of them belong to the cold cases group as shown in Table 1 below

Table 1. Clinical presentation of cases with gall stones

Clinical presentation	Number	Male	Female	%
Symptomatic gallstones	10	1	9	18.8
Chronic cholecystitis	17	—	17	32
jaundice	7	1	6	13.2
Incidental gallstone	3	1	2	5.6
total	37	3	34	100

The (6) remaining clinical presentations belong to the emergency cases group as shown in Table 2 below

Table 2. Acute presentation of gall stones

Clinical presentation	Number	Male	Female	%
Acute cholecystitis	6	—	6	11.3
Acute biliary pancreatitis	5	1	4	9.4
cholangitis	2	1	1	3.7
Abdominal mass	1	—	1	1.8
Acute abdomen	1	—	1	1.8
Intestinal obstruction	1	—	1	1.8
total	16	2	14	100

The prevalent sex among our patients were females as shown in Table 3 below

Table 3. Gender

Gender	No.	%
Male	5	9.5
Female	48	90.5
Total	53	100

The age of the included patients is ranging from 18 to 73 years as shown in Table 4 below

Table 4. Age groups

Age groups in years	No.	Male	Female	%
10_20	2	—	2	3.7
21_30	11	2	9	20.7
31_40	21	—	21	39.6
41_50	7	1	6	13.2
51_60	8	2	6	15
61_70	2	—	2	3.7
More than 70	2	—	2	3.7
total	53	5	48	100

The distribution of the patients into the cold & emergency groups regarding their age is shown in Table 5 below

Table 5. Cold and Emergency group

Age in years	Cold cases group	Emergency cases group	Total no.
10_20	1	1	2
21_30	9	2	11
31_40	18	3	21
41_50	6	1	7
51_60	3	5	8
61_70	—	2	2
More than 70	—	2	2
total	34	16	53

The highest age group of gallstone disease presentation was between 31_40 years including (21) patients from the total of (53) patients. The presentation of gallstone disease as cold cases is higher than the emergency presentations as (37) patients (19.6%) were belongs to the cold cases group and (16) patients (8.4%) were of the emergency cases group. The highest clinical presentation of cold cases group was chronic

calculous cholecystitis (17) patients (76.4%), while the highest clinical presentation of the emergency cases group was acute cholecystitis (6) patients (3.1%). All the patients of the cold cases group underwent elective cholecystectomy while in the emergency cases group 6 patients needed emergency cholecystectomy & 9 patients underwent elective cholecystectomy following successful conservative management. CBD stone related complications were encountered in 12 patients out of the total 53 patients (22.6%) as

1. Obstructive jaundice 5 patients (9.4%)
2. Biliary pancreatitis in 5 patients (9.4%)
3. Cholangitis in 2 patients (3.7%)

DISCUSSION

Gallstones are the most common biliary pathology. It is estimated that gallstones are present in 10–15% of the adult population in the USA. They are asymptomatic in the majority (> 80%). In the UK, the prevalence of gallstones at the time of death is estimated to be 17% and may be increasing. Approximately 1–2% of asymptomatic patients will develop symptoms requiring cholecystectomy per year, making cholecystectomy one of the most common operations performed by general surgeon. Patients typically complain of right upper quadrant or epigastric pain, which may radiate to the back. This may be described as colicky, but more often is dull and constant. Other symptoms include dyspepsia, flatulence, food intolerance, particularly to fats, and some alteration in bowel frequency. Biliary colic is typically present in 10–25% of patients. This is described as a severe right upper quadrant pain that ebbs and flows associated with nausea and vomiting. Pain may radiate to the chest. The pain is usually severe and may last for minutes or even several hours. Frequently, the pain starts during the night, waking the patient. Minor episodes of the same discomfort may occur intermittently during the day. Dyspeptic symptoms may coexist and be worse after such an attack. As the pain resolves, the patient is able to eat and drink again, often only to suffer further episodes. It is of interest that the patient may have several episodes of this nature over a period of a few weeks and then no more trouble for some months. Among the (53) adult patients included in the study (10) different clinical presentations of gallstone disease were identified, four of them who included (37) patient (19.6%) belong to the cold cases group and six of them who included (16) patients (8.4%) belong to the emergency cases group. Within the cold cases group (4) different clinical subgroups of presentations were identified including symptomatic gallstones, chronic cholecystitis, jaundice, incidental gallstones and within the emergency cases group six different clinical subgroups of presentations including acute cholecystitis, acute biliary pancreatitis, cholangitis, abdominal mass, acute abdomen, intestinal obstruction, all the included patients underwent cholecystectomy either as elective or emergency surgery.

Conclusion

Gallstone disease is common and has a wide spectrum of different clinical presentations from silent and asymptomatic to severe life threatening. Among the (10) different clinical presentations of gallstone disease who were encountered six of them were emergency ones, the presentations of gallstone disease as a cold cases out way that as an emergency cases. The highest presenting age group in cold cases group was between 31-40 years and the lowest age group was between 10-20 years, while the highest presenting age group in emergency cases group was between 51-60 years and the lowest presenting age group was between 10-20 years. The highest clinical presentation in cold cases group was chronic cholecystitis while the highest clinical presentation in emergency cases group was acute cholecystitis. The incidence of emergency presentations of gallstone disease is higher in elderly patients than in young age groups.

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