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FREQUENCY OF CHOLELITHIASIS - RELATED COMPLICATIONS IN MALE GENDER ATTENDING SURGICAL DEPARTMENT AT KING KHALID GENERAL HOSPITAL, MAJMAAH, KSA

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ABSTRACT

Introduction: Gallstone disease known as cholelithiasis is one of the most common Biliary Tract disorder. Cholelithiasis is common with the incidence ranging from 10% to 20% of the world population, 11% of the general population of the US. The burden of gallstone disease and its complications, such as cholecystitis, pancreatitis, and cholangitis, are major public health issues globally. **Objectives:** This study aimed at determining the frequency of cholelithiasis-related complications in males admitted to surgical department at King Khalid General Hospital and assessing outcomes of male patients presented with cholelithiasis-related complications following case-tailored management. **Methodology:** It was a Retrospective descriptive, facility-based study to estimate the frequency and evaluation of cholelithiasis-related complications in males hospitalised in surgical department at King Khalid General Hospital, Majmaah, Saudi Arabia, January 2014-December 2016. **Results:** 83 males were enrolled in our study, with their age groups being ranged from 19 to 99 years (M = 45.55, SD = 16.34). 5 different Complications were reported in our sample of interest. the majority, around 44.6%, suffered from Biliary colic followed by Acute cholecystitis (30.1%), Choledocholithiasis (13.3%), Chronic cholecystitis (8.4%) and Acute pancreatitis (3.6%) respectively. Following their treatment course, patients' outcomes were as follow: 74 patients have improved while 4 needed to be transferred to another healthcare facility, 4 were HAMA (Home Against Medical Advice)

and one escaped before completing the follow up period. **Conclusion:** Cholelithiasis-related complications reported in our 83 male participants were diverse as they suffered from 5 different Complications; Biliary colic (44.6%) followed by Acute cholecystitis (30.1%), Choledocholithiasis (13.3%), Chronic cholecystitis (8.4%), and Acute pancreatitis (3.6%) respectively.

INTRODUCTION

Gallstone disease known as cholelithiasis is one of the most common Biliary Tract disorder. Cholelithiasis is common with the incidence ranging from 10% to 20% of the world population, 11% of the general population of the US.(1) The burden of gallstone disease and its complications, such as cholecystitis, pancreatitis, and cholangitis, are major public health issues globally.[2]

In different populations, United States and United Kingdom tend to have higher prevalence than Asians: 16.6% in non-Hispanic white in the United States(3) 22.4% and 11.5% in British women and men,[4] but only 10.7%, and 3.2% in China, and Japan, respectively,[5,6] Epidemiological studies showed that increasing age was associated with an increased prevalence of gallstones. Gallstones are four to 10 times more frequent in older than younger subjects. Biliary cholesterol saturation increases with age, due to a decline in the activity of cholesterol 7α hydroxylase, the rate limiting enzyme for bile acid synthesis.[7]

Biliary tract disease in men, presented with higher complications, mortality rate than female patients.[8] Male gender was associated with twice the expected incidence of acute cholecystitis and pancreatitis in the elderly (> or = 65 years). Males had a significantly increased risk for conversion to open technique, but this decreased during the time frame of the study. Mortality was twice as high among males.[9]

It was found that in male gender, acute cholecystitis, respiratory and cardiovascular system disease were significantly related to postoperative morbidity. Age older than 65 years, male gender, respiratory and cardiovascular diseases were factors negatively affecting operative mortality.[10]

Acute cholecystitis cases account for 3%–10% of all patients with abdominal pain.

The percentage of acute cholecystitis cases increase in patients aged 50 and over, and decrease in patients under 50 years old with abdominal pain.[11-13] Also, Cholelithiasis is

reported in 40-70% of cases in Acute pancreatitis, while Choledocholithiasis occurs in up to approximately 20% of patients with cholelithiasis.[14-15]

Research Problem and Motivation

In search for previous studies regarding cholelithiasis-related complications in male gender were almost nonexistent in Saudi Arabia. Very few articles have been published in regard to that matter. Cholelithiasis is one of the most common reasons for presentation to outpatient department and leads to substantial health care costs.

Owing to the fact that scanty data were found in the literature, hence our study aimed to explore common related complications of cholelithiasis in male gender, and to assess outcomes after appropriate case-tailored management in surgical clinic at King Khalid General Hospital, Majmaah, Saudi Arabia, retrospectively from 2014 to 2016.

OBJECTIVES

To determine the frequency of cholelithiasis related complications in male gender admitted to surgical department at King Khalid General Hospital.

To assess outcomes of male patients presented with cholelithiasis-related complications following proper management.

METHODOLOGY

Study design

It was a Retrospective descriptive, facility-based study to estimate the frequency and evaluation of cholelithiasis related complications in male gender in surgical department at King Khalid General Hospital, Majmaah, Saudi Arabia, January 2014- December 2016.

Study area

Majmaah city is a middle town. It is 180 km far away from the capital city of kingdom of Saudi Arabia (Riyadh). Majmaah has an area of 30000 square kilometers and is the capital of the Sudair area. The population of the town is around 48,000.

Study population

Patients who have been admitted to the surgical department in King Khalid General Hospital in Majmaah complaining of gallstone-related complications in male gender that were taken during January 2014- December 2016, were included in this study.

Sampling

Total enumeration method where data of patients complained of gallstone disease was collected using medical records from January 2014 - December 2016, were considered in this study.

Data collection

A pre-tested checklist was used to collect the data.

Data analysis

Data were entered and analyzed using SPSS 23.0 and STATA 8.2. Mean + S.D were given for quantitative variables. Frequencies and percentages were given for qualitative variables.

Ethical consideration

This study was approved by the ethical committee of the basic health research center in Majmaah university. Permission was obtained from King Khalid General Hospital administration.

RESULTS

We included 83 males, their ages ranged from 19 to 99 years (table 1) (M = 45.55, SD = 16.34). The most preventable age group was from 35 to 50 years. They suffered from 5 different Complications. 44.6% suffered from Biliary colic followed by Acute cholecystitis (30.1%), Choledocholithiasis (13.3%), Chronic cholecystitis (8.4%) and Acute pancreatitis (3.6%) respectively (figure 1) (table 1).

The outcomes varied from improving to cases needed to transferred to another specialist. 74 patients have improved and 4 needed to be transferred as well 4 have HAMA (Home Against Medical Advice) and one escaped before completing the follow up period (Table2) (figure 2).

Table 1: Age and Complications.

Variable	Value
Total	83
Age: in years	
mean (SD)	45.55 (16.34)
18-35	26 (31.3%)
35-50	33 (39.8%)
>50	24 (28.9%)
Complications (%)	
Acute cholecystitis	25 (30.1%)
Chronic cholecystitis	7 (8.4%)

Biliary colic	37 (44.6%)
Choledocholithiasis	11 (13.3%)
Acute pancreatitis	3 (3.6%)

Table 2: Outcomes Prevalence (%).

Improved	**74 (89.2%)**
Hama	4 (4.8%)
Transferred	4 (4.8%)
Escaped	1 (1.2%)

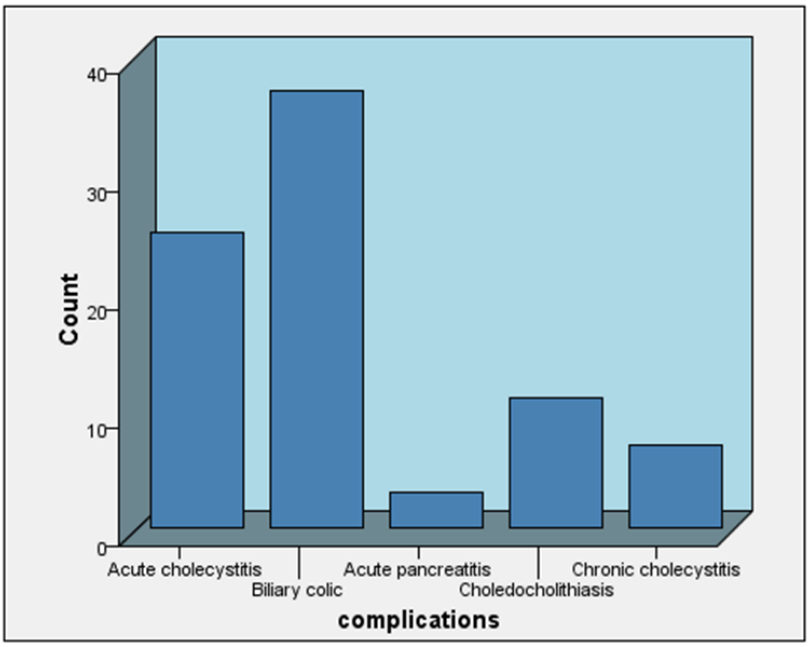

Figure 1: complications.

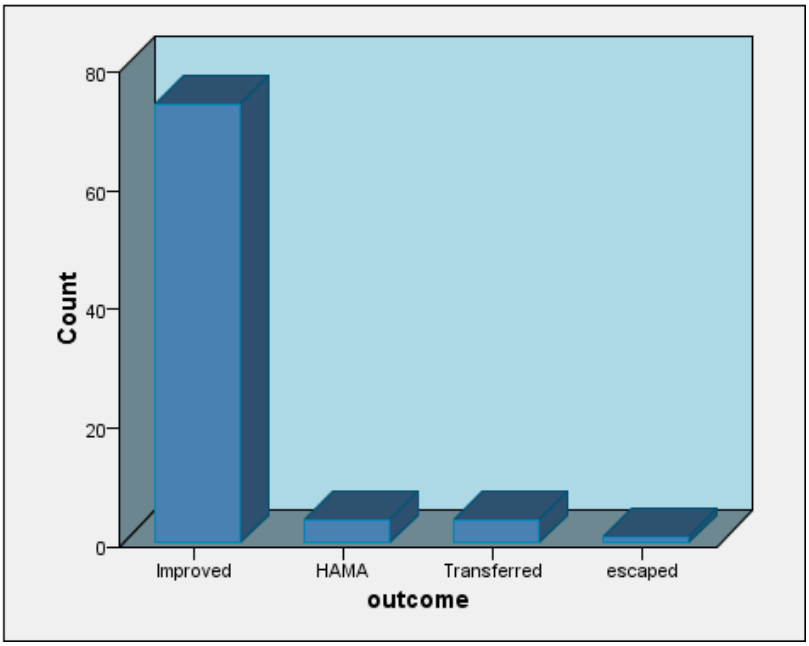

Figure 2: outcomes.

DISCUSSION

Cholelithiasis is the major cause of morbidity all over the world. In well-developed countries, the prevalence of cholelithiasis is about 24% but its prevalence is low in underdeveloped countries.[16]

Our research study has concluded that Biliary colic is more common than Acute cholecystitis and Acute Pancreatitis. These results are consistent with the study of Russell JC, Walsh SJ.[9]

On the contrary, Cho jy et al found in a study done in Seongnam, Korea[17] that patients who underwent laparoscopic cholecystectomy were chronic cholecystitis (n = 704 [66.5%]) and Acute cholecystitis (n = 355; [33.5%]). The variations between the above results could be attributed to many factors like the sample size, and the place where study was performed, and whether it is a hospital based or a community based.

The mean age of patients in our study was (M = 45.55 years old, SD = 16.34) which is approved in the literature and considered as risk factor for gallstone disease and its potential complications.[18-19]

CONCLUSION

Cholelithiasis-related complications reported in our 83 male participants were diverse as they suffered from 5 different Complications; Biliary colic (44.6%) followed by Acute cholecystitis (30.1%), Choledocholithiasis (13.3%), Chronic cholecystitis (8.4%), and Acute pancreatitis (3.6%) respectively. As a result, majority of patients have improved and recovered fully from Cholelithiasis-related complications.

LIMITATIONS

As data were collected retrospectively, patients' medical record was the collecting tool. Unfortunately, it was not maintained for research purposes as plenty of significant missing information hindered us from extensively studying other potential confounders.

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