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PREVALENCE OF CHOLELITHIASIS IN PATIENTS DIAGNOSED WITH CHOLELITHIASIS INDICATORS.

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Abstract

This study aimed to assess the prevalence of cholelithiasis in patients diagnosed with cholelithiasis indicators. in a gastroenterology outpatient setting over 3 months from June to August 2024. A total of 69 patients aged 20 to 60 years, diagnosed with cholelithiasis indicators. based on clinical symptoms and normal upper gastrointestinal endoscopy findings, were included. Exclusion criteria involved patients with organic diseases, a history of cholecystectomy, or gastric surgeries. Data on age, gender, BMI, disease duration, and the presence of cholelithiasis, diagnosed through transabdominal ultrasound, were collected. The results revealed that 37.7% of patients had cholelithiasis, with a higher prevalence observed in the 41-50 years age group. Most patients (60.9%) presented with symptoms lasting ⩽2 weeks, while 39.1% reported symptoms lasting longer. The study highlighted a significant overlap between CHOLELITHIASIS INDICATORES. and cholelithiasis, with varying prevalence based on demographic factors such as age and BMI. This underscores the need for careful diagnostic evaluation to distinguish between these conditions and provide effective management strategies. Dr. Yahya, from the Gastroenterology and Hepatology Clinic, led the study, contributing valuable insights into the relationship between these two gastrointestinal disorders.

INTRODUCTION

Biliary colic, also known as symptomatic cholelithiasis, a gallbladder attack or gallstone attack, is when a colic (sudden pain) occurs due to a gallstone temporarily blocking the cystic duct [1]. Typically, the pain is in the right upper part of the abdomen, and it can be severe [2]. Pain usually lasts from 15 minutes to a few hours [1]. Often, it occurs after eating a heavy meal or during the night [1]. Repeated attacks are common [3]. Cholecystokinin, a gastrointestinal hormone, plays a role in the colic, as following the consumption of fatty meals, the hormone triggers the gallbladder to contract, which may expel stones into the duct and temporarily block it until successfully passed [4]. Gallstone formation occurs from the precipitation of crystals that aggregate to form stones. The most common form is cholesterol gallstones [5]. Other forms include calcium, bilirubin, pigment, and mixed gallstones [5]. Other conditions that produce similar symptoms include appendicitis, stomach ulcers, pancreatitis, and gastroesophageal reflux disease [1]. Treatment for gallbladder attacks is typically surgery to remove the gallbladder [1]. This can be either done through small incisions or through a single larger incision [1].

Open surgery through a larger incision is associated with more complications than surgery through small incisions [6]. Surgery is typically done under general anesthesia [1]. In those who are unable to have surgery, medication to try to dissolve the stones or shock wave lithotripsy may be tried [1]. As of 2017, it is not clear whether surgery is indicated for everyone with biliary colic [6]. In the developed world, 10 to 15% of adults have gallstones [3]. Of those with gallstones, biliary colic occurs in 1 to 4% each year [3]. Nearly 30% of people have further problems related to gallstones in the year following an attack [3]. About 15% of people with biliary colic eventually develop inflammation of the gallbladder if not treated [3]. Other complications include inflammation of the pancreas [3]. Pain is the most

common presenting symptom. It is usually described as sharp, crampy, dull, or severe right upper quadrant pain, which may radiate to the right shoulder or less commonly behind the breastbone [7]. Nausea and vomiting can be associated with biliary colic. Individuals may also present with pain that is induced following a fatty meal and the symptom of indigestion. The pain often lasts longer than 30 minutes, up to a few hours [7]. The pain caused by biliary colic can become so extreme that sufferers may admit themselves to emergency rooms and hospitals to seek treatment [8]. In general, the pain subsides once the gallstone is successfully passed [8], but soreness may persist for around 24 hours after the worst of the pain passes [9]. Biliary colic can be distinguished from other digestive conditions with similar symptoms, such as indigestion, gastric reflux, or heartburn, in that the pain caused by biliary colic is not relieved by vomiting, bowel movements, or flatulence [10]. The pain is also not affected by changes in posture or antacid medicine [11].

Episodes of biliary colic are generally intermittent, and sufferers may experience several weeks or months without an attack before experiencing it again [10]. Patients usually have normal vital signs with biliary colic, whereas patients with cholecystitis are usually febrile and more ill-appearing. Lab studies that should be ordered include a complete blood count, liver function tests, and lipase. In biliary colic, lab findings are usually within normal limits. Alanine aminotransferase and aspartate transaminase are usually suggestive of liver disease, whereas elevation of bilirubin and alkaline phosphatase suggests common bile duct obstruction [12]. Dyspepsia has a wide range of causes, including peptic ulcer disease, gastroesophageal reflux, cholelithiasis, pancreatitis, various medications, CHOLELITHIASIS INDICATORES.., and, less commonly, gastric malignancy. CHOLELITHIASIS INDICATORES.., one of the most prevalent functional gastrointestinal disorders, is characterized by a normal esophagogastroduodenoscopy with no identifiable structural abnormalities. Common symptoms include unexplained fullness after eating,

inability to finish a normal-sized meal (early satiety), and epigastric pain or burning. Cholelithiasis, or gallstones, refers to hardened deposits of digestive fluid that form in the gallbladder. The pathogenesis of gallstones is multifactorial, involving factors such as hepatic cholesterol production, gallbladder stasis or inflammation, bile acid production, and intestinal cholesterol absorption. Risk factors for cholelithiasis include modifiable and nonmodifiable variables. Nonmodifiable risk factors include advancing age, female sex, ethnicity, family history, and hemolytic anemia (e.g., sickle cell disease). Modifiable risk factors include dyslipidemia, high-calorie or low-fiber diets, metabolic syndrome, obesity, rapid weight loss, weight loss cycling, sedentary lifestyles, smoking, and type 2 diabetes. These traditional risk factors are summarized by the "four F's": female, fat, forty, and fertile. A study published in 2015 in the International Journal of Clinical and Experimental Medicine demonstrated that 19% of patients diagnosed with CHOLELITHIASIS INDICATORES.. had concurrent cholelithiasis. This finding underscores the potential for overlap in clinical presentations between CHOLELITHIASIS INDICATORES.. and gallstone disease, leading to diagnostic challenges. The primary aim of this study is to determine the frequency of cholelithiasis in the local population presenting to the gastroenterology outpatient department with a diagnosis of CHOLELITHIASIS INDICATORES... By identifying the prevalence of cholelithiasis in this subset of patients, this study seeks to evaluate the likelihood of misdiagnosis in clinical practice. If the frequency of misdiagnosis is found to be high, locally practiced diagnostic protocols will be critically examined, and appropriate measures will be proposed to improve diagnostic accuracy, ultimately reducing patient morbidity and healthcare costs.

Gallstone disease and CHOLELITHIASIS INDICATORES.. share overlapping symptoms, which can lead to misdiagnosis and inappropriate management. This study aims to shed light on the diagnostic challenges in

distinguishing between these two conditions. Enhanced diagnostic protocols and greater awareness among healthcare providers could lead to improved patient outcomes and optimized use of healthcare resources.

MATERIALS AND METHODS

This cross-sectional descriptive study aimed to investigate the prevalence of cholelithiasis in patients diagnosed with cholelithiasis indicatores.. in a gastroenterology outpatient department over a 3-month period from 1st June 2024 to 31st August 2024. A total of 69 patients were included, with data collected using a non-probability consecutive sampling technique. The inclusion criteria comprised male and female patients aged 20 to 60 years, diagnosed with cholelithiasis indicatores based on clinical symptoms and normal upper gastrointestinal endoscopy findings. Exclusion criteria involved patients with organic gastrointestinal diseases, a history of cholecystectomy or gastric surgery, and secondary dyspepsia. Data were collected on demographic variables (age, gender, BMI, and disease duration) and the presence of cholelithiasis, which was diagnosed through transabdominal ultrasound. Descriptive statistics were used to summarize categorical variables, and associations between variables were assessed using the chi-square test. The results revealed that 37.7% of patients with cholelithiasis indicatores. were diagnosed with cholelithiasis, with a notable variation in the prevalence across different age groups, BMI classifications, and disease durations. This study highlights the significant overlap between cholelithiasis indicatores.. and cholelithiasis, emphasizing the need for careful diagnostic evaluation to avoid misdiagnosis and guide appropriate treatment strategies. Dr. Yahya, from the Gastroenterology and Hepatology Clinic, led this research, contributing valuable insights into the relationship between these two conditions.

RESULTS

The results of the study on the patient demographics and clinical characteristics reveal key insights into the distribution of various factors within the sample population. The age distribution shows a higher frequency of patients in the 41-50 years age group (44.9%), followed by 31-40 years (23.2%), and 20-30 years (17.4%). A smaller portion of the patients (14.5%) fall into the 51-60 years age category. In terms of gender distribution, the sample was slightly skewed towards males, with 53.6% of the patients being male and 46.4% female. Regarding BMI classification, the majority of patients were either underweight (30.4%) or normal weight (39.1%), with fewer patients being classified as overweight (20.3%) or obese (10.1%). The duration of disease shows that a majority (60.9%) of the patients had symptoms lasting for 2 weeks or less, while 39.1% experienced symptoms for longer durations. A significant number of patients (36.2%) had a history of previous surgery, and 63.8% did not undergo any prior surgery. In relation to cholelithiasis, 37.7% of the patients were diagnosed with gallstones, while the remaining 62.3% were not. When examining the correlation between age and cholelithiasis, it was found that the 41-50 years age group had the highest prevalence of cholelithiasis at 38.7%, followed closely by the 51-60 years age group (40%).

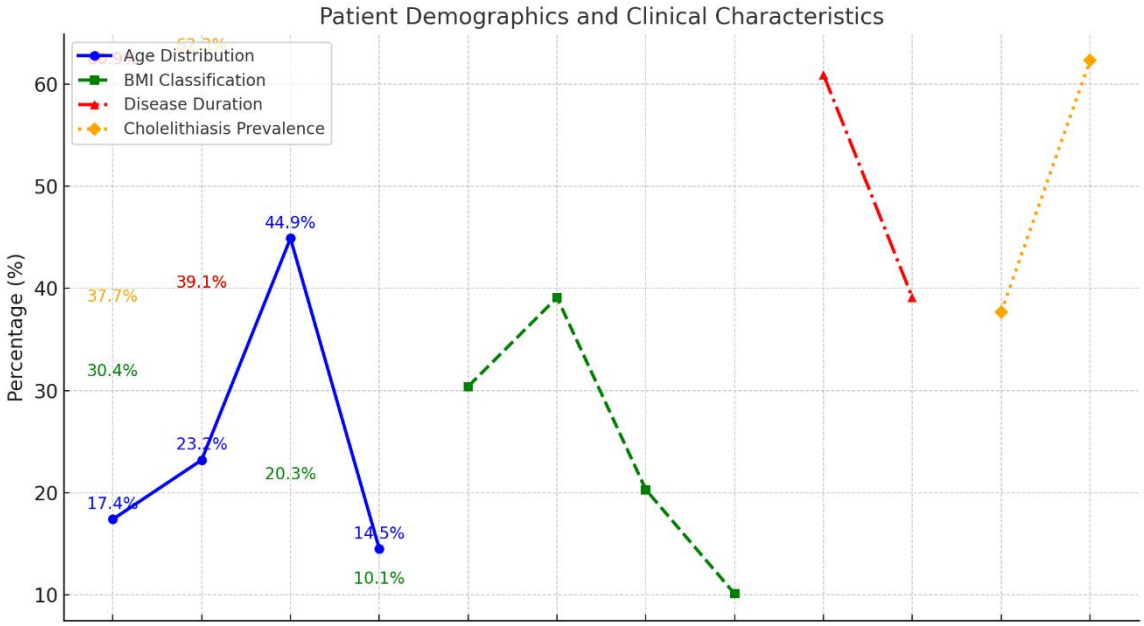
The BMI classification revealed that the highest percentage of patients with cholelithiasis were in the obese category (42.9%), while the percentage of cholelithiasis cases was slightly lower in the underweight (38.1%), normal (37%), and overweight (35.7%) categories. The duration of disease also demonstrated a relationship with cholelithiasis, as 44.4% of patients with symptoms lasting longer than 2 weeks had cholelithiasis, compared to 33.3% of those with symptoms lasting 2 weeks or less. Finally, the gender distribution showed nearly equal prevalence of cholelithiasis among males (37.8%) and females (37.5%). These results suggest that various demographic factors, including age, BMI, disease duration, and gender, contribute to the prevalence

of cholelithiasis, and a careful diagnostic approach should be considered for patients presenting with symptoms in this population.

TABLE DEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS: A COMPREHENSIVE OVERVIEW OF KEY HEALTH PARAMETERS"

Category	Subcategory	Frequency (n)	Percentage (%)
Age Distribution	20-30 Years	12	17.4
Age Distribution	31-40 Years	16	23.2
Age Distribution	41-50 Years	31	44.9
Age Distribution	51-60 Years	10	14.5
Gender Distribution	Male	37	53.6
Gender Distribution	Female	32	46.4
BMI Classification	Underweight	21	30.4
BMI Classification	Normal	27	39.1
BMI Classification	Overweight	14	20.3
BMI Classification	Obese	7	10.1
Duration of Disease	â‰¤ 2 weeks	42	60.9
Duration of Disease	> 2 weeks	27	39.1
Previous Surgery	Yes	25	36.2
Previous Surgery	No	44	63.8
Cholelithiasis	Yes	26	37.7
Cholelithiasis	No	43	62.3
Age vs Cholelithiasis	20-30 Years	4	33.3
Age vs Cholelithiasis	31-40 Years	6	37.5
Age vs Cholelithiasis	41-50 Years	12	38.7
Age vs Cholelithiasis	51-60 Years	4	40
BMI vs Cholelithiasis	Underweight	8	38.1

BMI vs Choleliasis	Normal	10	37
BMI vs Cholelithiasis	Overweight	5	35.7
BMI vs Cholelithiasis	Obese	3	42.9
Duration of Disease vs Cholelithiasis	â‰¤ 2 Weeks	14	33.3
Duration of Disease vs Cholelithiasis	> 2 Weeks	12	44.4
Gender vs Cholelithiasis	Male	14	37.8
Gender vs Cholelithiasis	Female	12	37.5



DISCUSSION

Apparently, lots of patients are treated with cholecystectomy due to dyspeptic complaints and not gallstone symptoms, and indeed, develop chronic persistent abdominal pain. Three big investigations pointed to comparable percentages of persistent symptoms as 37%, 31%, 40.4%, and 19%, and in the last study, the percentage got up to 59.5% and 32%. Prior studies indicate that should the preoperative evaluation be systematized, and other sources of chest pain be excluded, overall postoperative symptomatology does indeed become notably enhanced [11][12]. These symptoms are prohibitive for the

patients and the healthcare as 56% of the patients will require other healthcare, against the median cost per patient every year. Employed patients undergoing sickness absenteeism and loss of production contribute another $361 per year per patient in working cost [13].Lower dyspeptic symptom prevalence levels are, however, observed in population-based 'healthy' unselected patients. We confirmed earlier in this study that the hospital-based and population-based prevalences of dyspeptic symptoms are different and that dyspeptic symptoms are not causally related to gallstones [14][15]. Only biliary colic and the use of radiating pain and analgesics correlated with gallstones as suggested by our hypothesis that dyspeptic symptoms cannot be attributed to gallstones. Accordingly, cholecystectomy for dyspeptic symptoms alone, which has been standard in recent years, is unwarranted and underlines the importance of sound criteria for cholecystectomy.Most of the research focuses in this area were European or South Asian. These results indicate that the general prevalence of dyspepsia and cholecystolithiasis differs between the continents and do not allow extending the study results to other continents. However, since cholecystolithiasis – particularly of the cholesterol gallstone type – and FGID are mainly confined to Western societies, this review was in advance expected to have its biggest impact on the Western world [16]

CONCLUSION

Patients with cholecystolithiasis complain of symptoms that mimic CHOLELITHIASIS INDICATORES.. usually. Gallstones with nonspecific abdominal symptoms are confirmed in this paper, and physicians dealing with such patients should be aware of this phenomenon.

Decision is required to identify those patients who should be given cholecystectomy because other surgical intervention is not suitable for them.

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