

Clinical Profile of Patients with Gallstones: A Descriptive Study

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Abstract

Introduction: Gallstones are hardened deposits of the digestive fluid bile, that can form within the gallbladder. They vary in size and shape from as small as a grain of sand to as large as a golf ball. Gallstones occur when there is an imbalance in the chemical constituents of bile that result in precipitation of one or more of the components. **Methodology:** A study was carried out in a tertiary care hospital to know the profile of patients with gall stones. Totally 50 patients were considered for their study and these patients were selected by using non probability purposive random sampling technique. **Results:** The most common presenting complaint was hypogastric (56%) followed by epigastric (24%) and acute cholecystitis (20%). **Conclusion:** Gallstones are 4-10 times more frequent in older than younger subjects. Biliary cholesterol saturation increases with age.

Keywords: Gallstones; Cholecystitis; Clinical Profile.

Introduction

Gallstones disease is one of the commonest general surgical problems requiring operative intervention in India. 10 – 15% of adults in the developed countries will develop gallstones. In the United States more than 500,00 cholecystectomies are performed per year, making it the commonest upper abdominal surgery [1] performed Ever since Langenbuch performed first cholecystectomy more than a 110 year ago [2].

Stones in the gallbladder may cause such

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symptoms as flatulent dyspepsia. This symptom includes a feeling of fullness after food, belching and heart burn which becomes worse after a large fatty meal. Such symptom in a patient should arouse suspicion of presence of stone in the gallbladder. One should exclude oesophageal hiatus hernia and chronic pancreatitis which also give rise to flatulent dyspepsia Biliary colic refers to the gradual but steady onset of pain in the right upper quadrant. It is brought on by the attempted passage of gallstones. The pain of biliary colic increases in intensity over 30 minutes to 1 hour, persists for 4 to 6 hours and gradually resolves over 2 to 3 hours. The pain may radiate around to the back or to the tip of right scapula. Nausea and vomiting may occur. Pain is precipitated by ingestion of certain foods especially fatty ones. The patient may have tenderness in the right upper quadrant.

The current therapy of gallstone disease is based on the thorough understanding of the anatomy, physiology and biochemistry responsible for the pathogenesis of gallstones. Perhaps no other disease can boast of having such an extensive armamentarium of treatment modalities lined up against it [3,4].

Methodology

A study was carried out in a tertiary care hospital to know the profile of patients with gall stones. Totally 50 patients were considered for their study and these patients were selected by using non probability purposive random sampling technique. After getting the consent, history was taken and thorough clinical examination was done including the necessary investigations to confirm presence or absence of common bile duct stones, documented by history, radiological and biochemical investigations.

Data was entered in Microsoft excel and was analyzed using SPSS

Results

Study subjects included both males and females. Males constituted 60% and females 40%

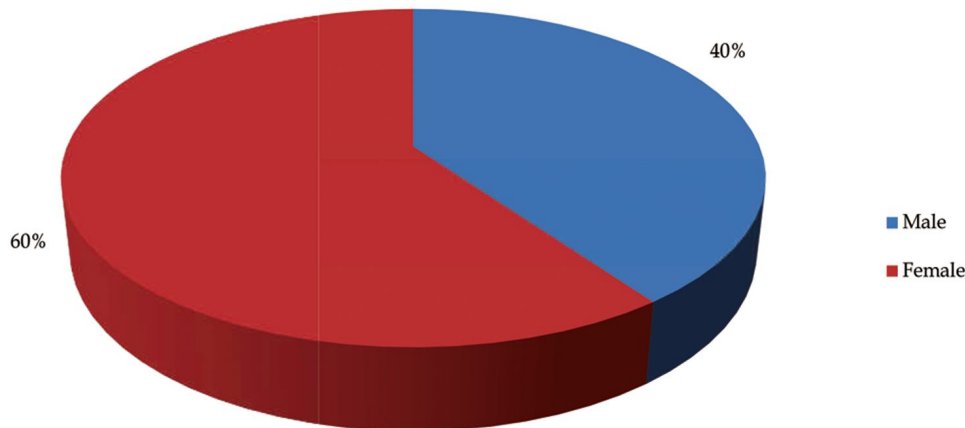


Fig. 1: Patient distribution

Table 1: Age distribution

Age group	Number	Percentage
21 – 30 years	03	06
31 – 40 years	05	10
41 – 50 years	24	48
51 – 60 years	12	24
61 – 70 years	06	12
Total	50	100

Among total 50 study subjects, maximum numbers of patients were in the age group of 41 – 50 years (48%) followed by 51 – 60 years (24%), 61 – 70 years (12%), 31 – 40 years (10%) and 21 – 30 years (06%)

Table 2: Presenting complaints

Complaints	Number	Percentage
Epigastric	12	24
Hypogastric	28	56
Acute cholecystitis	10	20
Total	50	100

The most common presenting complaint was hypogastric (56%) followed by epigastric (24%) and acute cholecystitis (20%)

Table 3: Biliary symptoms

Biliary Symptoms	Number	Percentage
Grade I	16	32
Grade II	24	48
Grade III	10	20
Grade IV	00	00
Total	50	100

Biliary symptoms were in Grade I among 32% of patients, Grade II among 48% of patients

Table 4: ASA grading

ASA grading	Number	Percentage
Grade I	00	00
Grade II	42	84
Grade III	06	12
Grade IV	02	04
Total	50	100

In ASA Grading, 84% of patients were in Grade II, 12% of patients in Grade III, and 4% of patients were in Grade IV

Discussion

Among total 50 study subjects, maximum numbers of patients were in the age group of 41– 50 years (48%) followed by 51–60 years (24%), 61–70 years (12%), 31–40 years (10%) and 21–30 years (06%). The most common presenting complaint was hypogastric (56%) followed by epigastric (24%) and acute cholecystitis (20%). Biliary symptoms were in Grade I among 32% of patients, Grade II among 48% of patients

For practical purpose gallbladder disease can be equated with gallstones as these are present in the large majority of patients [5]. Most patients with gallstones have no symptoms [6]. These gallstones are called “silent stones” and may not require treatment.

Patients with symptomatic stones most often present with recurrent episodes of right-upper-quadrant or epigastric pain, probably related to the impaction of a stone in the cystic duct [7]. They may experience intense pain in the upper-right side of the abdomen, often accompanied by nausea and vomiting, that steadily increases for approximately 30 min to several hours. A patient may also experience referred pain between the shoulder blades or below the right shoulder region (Boas’ sign). Often, attacks occur after a particularly fatty meal and almost always happen at night [8].

Some patients with gallstones present with acute cholecystitis, and often secondary infection by intestinal microorganisms, predominantly *Escherichia coli* and *Bacteroides* species. Inflammation of the gallbladder wall causes severe

abdominal pain, especially in the right upper quadrant, with nausea, vomiting, fever, and leucocytosis [9]. This condition may remit temporarily without surgery, but it sometimes progresses to gangrene and perforation. Less commonly, gallstones can become lodged in the common bile duct (choledocholithiasis), sometimes with obstruction of the common bile duct and symptoms of cholestasis [8]. Obstruction leading to jaundice though commonly caused by a stone migrating into the common bile duct, can be due to compression of the common hepatic duct by a stone in the neck of the gall bladder or cystic duct (Mirizzi syndrome) [10]. Infection in the bile ducts (cholangitis) can occur even with a seemingly minor degree of obstruction to bile flow. Stones in the common bile duct usually cause pain in the epigastrium or right upper quadrant, but may be painless. The passage of common-bile-duct stones can provoke acute pancreatitis, probably by transiently obstructing the main pancreatic duct where it passes near the common bile duct at the ampulla of Vater. Gallstones may fistulate directly into the duodenum from the gallbladder during a period of silent inflammation [11]. This stone can impact in the duodenum leading to duodenal obstruction (Bouveret's syndrome) Alternatively, gallstones can impact at the narrowest portion of healthy small, bowel causing an obstruction termed gallstone ileus [12,13].

Conclusion

Biliary calcium concentration plays a part in bilirubin precipitation and gallstone calcification. Treatment of gallstones should be reserved for those with symptomatic disease.

References

1. Townsend CM, Beauchamp DR, Evers MB, Mattox KL. Sabiston Textbook of surgery. 17th ed. Philadelphia: Elsevier. 2003; p. 1612.
2. Schwartz SI, Tom G, Spencer FC, Daly JM, Fischer J, Galancey AF. Principles of surgery. New York: McGraw-Hill. 2000; 2: 1437-65.
3. Cgesylin-curtis R.C.G. New trends in gallstone management. Br.J.of Surg. 1991; 98: 143-49.
4. Cooper E.D. Pathogenesis and treatment of gallstone disease. GastroClin N Am, March 1991.
5. Burkitt DP, Tunstall M. Gall-stones: Geographical and chronological features. J Trop Med Hyg. 1975; 78: 140-4.
6. LaMont JT, Smith BF, Moore JR. Role of gallbladder mucin in pathophysiology of gallstones. Hepatology. 1984; 4: 51S-6.
7. Rigas B, Torosis J, McDougall CJ, Vener KJ, Spiro HM. The circadian rhythm of biliary colic. J ClinGastroenterol. 1990; 12: 409-14.
8. Fitzgerald JE, Fitzgerald LA, Maxwell-Armstrong CA, Brooks AJ. Recurrent gallstone ileus: Time to change our surgery? J Dig Dis. 2009; 10: 149-51.
9. McSherry CK, Ferstenberg H, Calhoun WF, Lahman E, Virshup M. The natural history of diagnosed gallstone disease in symptomatic and asymptomatic patients. Ann Surg. 1985; 202: 59-63.
10. Johnson LW, Sehon JK, Lee WC, Zibari GB, McDonald JC. Mirizzi's syndrome: Experience from a multi-institutional review. Am Surg. 2001; 67: 11-4.
11. Sanders G, Kingsnorth AN. Gallstones. BMJ. 2007; 335: 295-9.
12. Hayes N, Saha S. Recurrent gallstone ileus. Clin Med Res. 2012; 10: 236-9.
13. Fink-Bennett D, DeRidder P, Kolozsi WZ, Gordon R, Jaros R. Cholecystokinin cholecintigraphy: Detection of abnormal gallbladder motor function in patients with chronic acalculous gallbladder disease. J Nucl Med. 1991; 32: 1695-9.