

ORIGINAL RESEARCH

A study of clinical profile and factors associated with gall stones at tertiary health care centre

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ABSTRACT

Background: The gallbladder is stimulated to contract and expel the bile in to duodenum by the hormone cholecystokinin pancreozymin (CCK) produced by the endocrine cells of the duodenal mucosa in response to food (Norman S. Williams, Bailey and Loves, 25th edition). **Aims and Objectives:** Study of Clinical profile and factors associated with Gall Stones at tertiary health care center. **Methodology:** This was a cross-sectional study in the patients of Gall bladder disease in the department of Surgery of a tertiary health care center during the year January 2016 to January 2017 so during one-year period there were 106 patients after written consent were included into study. The data was presented in the Tabular form and expressed in the percentages. **Result:** In our study we have seen that The majority of the patients were in the age group of 40-50 were 30.19%, followed by 50-60 -26.42%, >60 were 19.81%, 30-40 were 14.15%, 20-30 were 6.60%, <20 were 2.83%. The majority of the patients were Female i.e. 55.66 %, followed by Male- 44.34 %. The most common clinical features were Belching in 90%, followed by Heartburn in 85%, Nausea -80%, Vomiting in 78%, Bloating feeling after meals in 74%, Intolerance to fatty or fried foods in 70%. Bitter taste in the morning in 65%, Epigastric discomfort in 59%, Pain in right shoulder in 49%, Back pain in 43%. The most common associated factors were Age >40 in 76.41%, Obese (BMI > 30) in 60%, Female -55.66 %, Family history in 50%, H/o Diabetes -49%, H/o Liver disease -43%, Non- Veg diet-40%, Diet low in fiber -39% **Conclusion:** It can be concluded from our study that The most common clinical features were Belching, followed by Heartburn, Nausea etc. and the most common associated factors were Age >40, Obese (BMI > 30), Female sex, Family history, H/o Diabetes, H/o Liver disease, Non- Veg diet Diet low in fiber etc.

Keywords: Gall Stones, Clinical features of Gall Stones, Risk factors of Gall Stones.

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INTRODUCTION

The gallbladder is stimulated to contract and expel the bile in to duodenum by the hormone cholecystokinin pancreozymin (CCK) produced by the endocrine cells of the duodenal mucosa in response to food (Norman S. Williams, Bailey and Loves, 25th edition)¹. The inner surface of bladder is covered by mucosa with simple columnar epithelium with microvilli, Muscularis mucosa and submucosa are absent in gallbladder. Mucus glands are only present in neck region of gallbladder². Cholelithiasis has been described as a disease of civilization. It is observed in Egyptian mummies dating as far back as 3400 B.C. It appears likely that Charaka (2nd century B.C.) and Sushruta (6th Century B.C.) from India were also familiar with this disease of the biliary tract^{3,4}. The severity of gallstone disease has previously been shown to related to gallstone type and particularly septic complications are much more common in patients with pigment gallstones than in patients with cholesterol gallstones^{5,6}. Various sign and symptoms like severe pain in Murphy's point in right upper quadrant of abdomen, bilious vomiting, mild to moderate increase in temperature, obstructive jaundice, loss of appetite and weight are present in cholelithiasis⁷

MATERIAL AND METHODS

This was a cross-sectional study in the patients of Gall bladder disease in the department of Surgery of a tertiary health care center during the year January 2016 to January 2017 so during one-year period there were 106 patients after written consent were included into study. All details of the patients like age, sex, Clinical features and associated factors like Age, Obesity, Family history, H/o Diabetes, H/o Liver disease, Non- Veg diet, Diet low in fiber etc. was noted. The data was presented in the Tabular form and expressed in the percentages

RESULT

Table 1: Distribution of the patients as per the age

Age	No.	Percentage (%)
<20	3	2.83
20-30	7	6.60
30-40	15	14.15
40-50	32	30.19
50-60	28	26.42
>60	21	19.81
Total	106	100.00

The majority of the patients were in the age group of 40-50 were 30.19%, followed by 50-60 26.42%, >60 were 19.81%, 30-40 were 14.15%, 20-30 were 6.60%, <20 were 2.83%.

Table 2: Distribution of the patients as per the Sex

Sex	No.	Percentage (%)
Male	47	44.34
Female	59	55.66
Total	106	100

The majority of the patients were Female i.e. 55.66 %, followed by Male- 44.34 %.

Table 3: Distribution of the patients as per the clinical features

Clinical features	No.	Percentage (%)
Belching	95	90%
Heartburn	90	85%
Nausea	85	80%
Vomiting	83	78%
Bloated feeling after meals	78	74%
Intolerance to fatty or fried foods	74	70%
Bitter taste in the morning	69	65%
Epigastric discomfort	63	59%
Pain in right shoulder	52	49%
Back pain	46	43%

The most common clinical features were Belching in 90%, followed by Heartburn in 85%, Nausea 80%, Vomiting in 78%, Bloated feeling after meals in 74%, Intolerance to fatty or fried foods in 70% Bitter taste in the morning in 65%, Epigastric discomfort in 59%, Pain in right shoulder in 49%, Back pain in 43%.

Table 4: Distribution of the patients as per the associated factors

Associated factors	No.	Percentage (%)
Age >40	81	76.41%
Obese (BMI > 30)	64	60%
Female	59	55.66 %
Family history	53	50%
H/o Diabetes	52	49%
H/o Liver disease	46	43%
Non- Veg diet	42	40%
Diet low in fiber	41	39%

The most common associated factors were Age >40 in 76.41%, Obese (BMI > 30) in 60%, Female 55.66 %, Family history in 50%, H/o Diabetes -49%, H/o Liver disease -43%, Non-Veg diet-40%, Diet low in fiber -39%.

DISCUSSION

Despite the many efforts to delineate the clinical manifestations of gallbladder disease, the precise symptom complex associated with gallstones is still a matter of debate, and even the existence of gallstone-specific symptoms has been questioned.⁸⁻¹¹ Most of the attention has been focused on pain in gallstone patients, but there is no general agreement on its clinical meaning³ and it is questioned whether pain occurs in gallstone disease with specific characteristics.^{8,9} The identification of symptoms associated with this disease might help physicians in clinical decision making.¹⁰⁻¹⁴ Moreover, the possibility of identifying patients who are more likely to have gallstones through a clinical assessment would limit the excessive and inappropriate use of diagnostic procedures for detection of gallstones and

would lead to more specific and accurate therapeutic actions.¹²⁻¹⁴ In our study we have seen that The majority of the patients were in the age group of 40-50 were 30.19%, followed by 50-60 -26.42%, >60 were 19.81%, 30-40 were 14.15%, 20-30 were 6.60%, <20 were 2.83%. The majority of the patients were Female i.e. 55.66 %, followed by Male- 44.34 %. The most common clinical features were Belching in 90%, followed by Heartburn in 85%, Nausea 80%, Vomiting in 78%, Bloating feeling after meals in 74%, Intolerance to fatty or fried foods in 70% Bitter taste in the morning in 65%, Epigastric discomfort in 59%, Pain in right shoulder in 49%, Back pain in 43%. The most common associated factors were Age >40 in 76.41%, Obese (BMI > 30) in 60%, Female -55.66 %, Family history in 50%, H/o Diabetes -49%, H/o Liver disease -43%, Non- Veg diet-40%, Diet low in fiber -39%. These findings are similar to Davide Festi et al ¹⁵ they found gallstone-free subjects (GF), 1,832 (6.2%) patients with gallstones not previously diagnosed (GNPD), 638 (2.2%) patients with gallstones previously diagnosed (GPD), 1,660 (5.6%) patients with a history of cholecystectomy for gallstones (CC). In logistic regression analysis, pain at epigastrium and, even more, pain at right hypo-condrium were significantly associated with gallstones. For pain at right hypo-condrium, this association progressively increased from GNPD (OR 5 1.60, 95% CI 5 0.97-2.65) to GPD (OR 5 8.77, 95% CI 5 5.27-14.61) to CC (OR 5 59.40, 95% CI 5 43.87-80.42). Absence of heartburn combined with right hypo-condrium or epigastrium pain and intolerance to fried or fatty food were also significantly related to gallstones. We also found some pain characteristics significantly associated with gallstones, i.e., pain radiated to the right shoulder, forcing the patient to rest, occurring soon after meals or unrelated to meals, not relieved by bowel movements, and frequently accompanied by gallstonerelated morbidities. We developed a probability tree reporting the cumulative probability of having gallstones for each combination of those symptoms and characteristics of pain significantly associated with gallstones. In conclusion, we have identified symptoms and signs significantly associated with gallstones. We have shown that there is an increase in frequency and severity of these symptoms and signs across the different stages of gallstone disease.

CONCLUSION

It can be concluded from our study that The most common clinical features were Belching, followed by Heartburn, Nausea etc. and the most common associated factors were Age >40, Obese (BMI > 30), Female sex, Family history, H/o Diabetes, H/o Liver disease, Non- Veg diet Diet low in fiber etc.

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