

CLINICAL MANIFESTATIONS AND RISK FACTORS ASSOCIATED WITH GALLSTONE DISEASES – A PRELIMINARY STUDY

HTW Weerakoon^{1*}, JGS Ranasinghe², KB Galketiya³, S. Rosiro³, PAJ Perera¹, and JHMM Ranaweera³

¹ Department of Biochemistry, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Saliyapura.

² Department of Biochemistry, Faculty of Medicine, University of Peradeniya.

³ Department of Surgery, Faculty of Medicine, University of Peradeniya.

* harshitw83@yahoo.com.

Keywords: Gall stones, Cholelithiasis, Cholecystitis, Cholecystectomy

INTRODUCTION

Cholelithiasis is one of the most prevalent upper – gastrointestinal surgical disorders in world wide. Acute or chronic cholecystitis, biliary coilc, pancreatitis, obstructive jaundice and cholangitis are the main diseases found in the spectrum of cholelithiasis. The exact causes of the gall stone diseases still remain incompletely understood and a wide a range of clinical presentations of Cholelithiasis is identified (portincasa *et al.* 2006). The most specific symptom associated with gall stones is right hypochondrial pain which radiates to upper back (portincasa *et al.* 2006). Nausea and vomiting are the frequently associated symptoms of Cholelithiasis. However the non-specific symptoms like dyspeptic symptoms are also found to be a common clinical presentation of Cholelithiasis (portincasa *et al.* 2006). Due to this wide spectrum of symptoms it will be important to identify the population specific common clinical symptoms of Cholelithiasis. Verification of risk factors for cholelithiasis is of great value in detecting pathogenesis of gall stones. The female gender, advancing age, genetic background and increased parity are considered as non-modifiable risk factors whereas obesity, metabolic syndrome and usage of female sex hormones are recognized as modifiable risk factors (Shaffer 2006). It will be important to identify the risk factors for Sri Lankan population in which the pigment stones are considered to be prevalent. This study aims to describe the pattern of clinical presentation of cholelithiasis and to identify the physical risk factors for the pathogenesis of gall stones in patients who have undergone gall stone removal surgeries at Teaching Hospital Peradeniya.

METHODOLOGY

This study was carried out in the surgical unit of Teaching Hospital Peradeniya during the period of March 2010 to December 2010. This was done as a descriptive cross sectional study. The adult patients (age > 18 years) who were admitted to the gallstone removal surgeries were included in this study and the data were collected in pre-tested interviewer administered questionnaires.

RESULTS AND DISCUSSION

A total of 49 adult patients were admitted for open or laparoscopic cholecystectomy with or without bile duct exploration during this period. Of them 38 (78%) were females and 11 (22%) were males with male to female ratio of 4:1. The mean ages of males and females were 55 and 46 years respectively. Chronic cholecystitis 34 (69%) was the commonest clinical indication for the surgery and acute cholecystitis 6 (12%), obstructive jaundice 8 (16%), and chronic pancreatitis 1 (2%) were the other indications for surgery. Chronic cholecystitis has been identified as the commonest clinical indication in previous studies as well¹. All the patients had abdominal pain at the time of their presentation. However only 24 (49%) patients had been able to describe the specific site of the abdominal pain and the rest had non-specific abdominal pain and symptoms. The frequencies of clinical symptoms are summarized in table 1.

Table 1 - Frequency of clinical presentation of cholelithiasis

Clinical symptom	Frequency of presentation
Abdominal pain	49 (100%)
Right hypochondrial pain	20 (41%)
Epigastric pain	04 (08%)
Left hypochondrial pain	00 (00%)
Lower abdominal pain	00 (00%)
Generalized pain	25 (51%)
Nausea	27 (55%)
Vomiting	15 (31%)
Fever	07 (14%)
Jaundice	10 (20%)
Dyspeptic symptoms	28 (57%)

The mean Body mass Index (BMI) of females was 26.96 kg/m² (16 – 38 kg/m²) and only 9 (24%) female patients had been on hormonal contraceptives in their life time. Females were neither cigarette smokers nor alcohol drinkers. The mean number of pregnancies was 3 (0-8) and their mean age of menarche was 13 years (10-16 years). Male patients had average BMI of 24.23 kg/m² (19 – 28 kg/m²) and out of them 9 (82%) were cigarette smokers and 9 (82%) were alcohol drinkers. From the study group 14 (28%) patients had diabetes mellitus or hypertension. Out of the whole study group only 2 (4%) patients had a family history of gall stone disease. Of these risk factors, females seem to be more prone to develop cholelithiasis, quite similar to previous studies (Shaffer, 2006). The presenting age for both males and females is also found to be compatible with the established risk factors (Shaffer 2006). However only female patients are in overweight category in regards to their BMI and males are in normal range of BMI. In contrast to other studies the majority of female patients with Cholelithiasis in this group had lesser parity and majority of them had not been on hormonal contraceptives (Shaffer 2006).

CONCLUSIONS

Chronic cholecystitis is the commonest clinical manifestation in gall stone disease and it should be suspected in patients presenting even with non-specific abdominal symptoms. Middle aged overweight females are more prone to develop cholelithiasis. Parity, use of hormonal contraceptives and family history are not directly associated with cholelithiasis in females. Obesity was not found as a risk factor in males whereas smoking and alcohol consumption seem to be associated with cholelithiasis in males. This was a preliminary study to assess the applicability of known risk factors to our population. This rouses the need of a planned case control study to find out the exact risk factors in our community.

REFERENCES

- Portincasa, P, Moschetta, A, Petruzzelli, M, Palasciano, G, Di Ciaula, A, Pezzolla, A 2006, 'symptoms and diagnosis of gallbladder stones', *Best Practice and Research Clinical gastroenterology*, vol. 20, no.6, pp. 1017-1029.
- Shaffer, EA 2006, 'Epidemiology of gallbladder stone disease', *Best Practice and Research Clinical gastroenterology*, vol. 20, no.6, pp. 981-986.