

ORIGINAL RESEARCH

Assessment of incidence of post cholecystectomy syndrome in a tertiary care centre

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ABSTRACT

Background: Gall stones are one of the most common disorders of the gastrointestinal tract, affecting about 10% of people in Western society. The present study was conducted to assess incidence of post cholecystectomy syndrome in a tertiary care centre. **Materials & Methods:** 245 patients of post cholecystectomy syndrome both genders in department of general surgery, Sharda Hospital, School of Medical sciences and Research were selected. The details of surgery were documented; and once discharged, these patients were followed up for 6 months. On follow-up, symptoms, if any, were documented and investigated only if they persisted beyond 1 month of surgery. **Results:** There were 17.1% males and 82.9% females. At 1st month follow-up, bloating was seen among 1.2%, burping among 0.8%, epigastric pain among 8.2%, indigestion among 1.2%, loss of appetite among 0.4% and nausea and vomiting among 2.4%. At 2nd month follow-up, epigastric pain was seen among 5.3%, indigestion among 1.2%, and nausea and vomiting among 0.8%. At 3rd month follow-up, epigastric pain among 0.4%, indigestion among 0.8%, and nausea and vomiting among 0.4%. At 4th month follow-up, epigastric pain among 0.4% and indigestion among 0.4%. At 5th month follow-up, epigastric pain among 1 (0.4%) subject. At 6th month follow-up, epigastric pain among 1 (0.4%) subject. **Conclusion:** After Laparoscopic Cholecystectomy, less than half of patients will experience some symptoms; dyspeptic symptoms are the most frequent and last for quite some months; early signs include biliary and intestinal problems, both of which are temporary. Patients who have experienced acute cholecystitis episodes in the past or who have co-morbid illnesses are more likely to experience prolonged symptoms. Only individuals with persistent symptoms and no clear cause on examination should be classified as PCS since very few patients (less than 1% in the current study) had a discernible cause of symptoms.

Key words: post cholecystectomy syndrome, biliary and intestinal problems, epigastric pain

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INTRODUCTION

Gall stones are one of the most common disorders of the gastrointestinal tract, affecting about 10% of people in Western society. In most cases they do not cause symptoms, and only 10% and 20% will eventually become symptomatic within 5 years and 20 years of diagnosis. Thus, the average risk of developing symptomatic disease is low, and approaches 2.0-2.6%/years.¹

Patients with symptomatic gall stones 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.²

In the past, research has been conducted along several avenues to develop less invasive, painful, and expensive methods of gall stone treatment. Such methods as the application of oral desaturation agents (chenodeoxycholic acid, ursodeoxycholic acid), contact dissolution agents methyl tertbutylene ether (MTBE), and extracorporeal shock wave lithotripsy are limited by stone content, size, and number.³ In addition, they leave intact a gallbladder already known to harbour lithogenic bile. Thus, these non-operative methods are inadequate for a large proportion of gall stone patients and they cannot promise permanent cure from gall stone disease.⁴

Since the introduction of laparoscopic cholecystectomy by Erich Muhe in 1986, it has rapidly gained popularity and is now considered the treatment of choice for symptomatic gallstone disease. Its advantages over open cholecystectomy include reduced postoperative hospitalisation, reduced pain and morbidity, better cosmesis, early return to work and considerable financial savings.⁵The present study was conducted to assess incidence of post cholecystectomy syndrome in a tertiary care centre.

MATERIALS & METHODS

The present study consisted of 245 patients of post cholecystectomy syndrome both genders in

department of general surgery, Sharda Hospital, School of Medical sciences and Research. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Complete Blood Count, liver Function Test, amylase, lipase, USG whole abdomen was performed. Standard four-port LC was performed under general anaesthesia in all patients. The details of surgery were documented; and once discharged, these patients were followed up for 6 months. On follow-up, symptoms, if any, were documented and investigated only if they persisted beyond 1 month of surgery. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of study population according to age groups

Age groups	Frequency	Percent
15-30 years	75	30.6%
31-40 years	67	27.3%
41-50 years	51	20.8%
51-60 years	30	12.2%
Above 60 years	22	9.0%
Total	245	100.0%

Table I shows that majority of the subjects belonged to age group 15-30 years (30.6%) followed by 31-40 years (27.3%), 41-50 years (20.8%), 51-60 years (12.2%) and above 60 years (9.0%).

Table II Distribution of study population according to sex

Sex	Frequency	Percent
Male	42	17.1%
Female	203	82.9%
Total	245	100.0

Table II shows that there were 17.1% males and 82.9% females.

Table III Distribution of study population according to PCS symptoms in 1st month

1st month post operative	Frequency	Percent
Asymptomatic	210	85.7%
Bloating	3	1.2%
Burping	2	0.8%
Epigastric pain	20	8.2%
Indigestion	3	1.2%
Loss of appetite	1	0.4%
Nausea and vomiting	6	2.4%

Table III shows that at 1st month follow-up, bloating was seen among 1.2%, burping among 0.8%, epigastric pain among 8.2%, indigestion among 1.2%, loss of appetite among 0.4% and nausea and vomiting among 2.4%.

Table IV Distribution of study population according to PCS symptoms in 2nd month

2nd month post operative	Frequency	Percent
Asymptomatic	227	92.7%
Epigastric pain	13	5.3%
Indigestion	3	1.2%
Nausea and vomiting	2	0.8%

Table IV shows that at 2nd month follow-up, epigastric pain was seen among 5.3%, indigestion among 1.2%, and nausea and vomiting among 0.8%

Table V Distribution of study population according to PCS symptoms in 3rd month

3rd month post operative	Frequency	Percent
Asymptomatic	241	98.4%
Epigastric pain	1	0.4%

Indigestion	2	0.8%
Nausea and vomiting	1	0.4%

Table V at 3rd month follow-up, epigastric pain among 0.4%, indigestion among 0.8%, and nausea and vomiting among 0.4%.

Table VI Distribution of study population according to PCS symptoms in 4th month

4 th month	Frequency	Percent
Asymptomatic	243	99.2%
Epigastric pain	1	0.4%
Indigestion	1	0.4%

Table VI shows that at 4th month follow-up, epigastric pain among 0.4% and indigestion among 0.4%.

Table VII Distribution of study population according to PCS symptoms in 5th month

5 th month	Frequency	Percent
Asymptomatic	244	99.6%
Epigastric pain	1	0.4%
Total	245	100.0

Table VII shows that at 5th month follow-up, epigastric pain among 1 (0.4%) subject.

Table VIII Distribution of study population according to PCS symptoms in 6th month

6 th month	Frequency	Percent
Asymptomatic	244	99.6%
Epigastric pain	1	0.4%
Total	245	100.0

Table VIII shows that at 6th month follow-up, epigastric pain among 1 (0.4%) subject.

DISCUSSION

A cholecystectomy surgery itself is linked to a number of physiological alterations in the digestive system. After a cholecystectomy, hormonal changes that predominantly affect the upper digestive system also become apparent.⁶ Additionally, there is a disruption of the cholecysto-sphincter of Oddi reflex leading to cholecysto-antral reflux & cholecysto-oesophageal reflux. As a result, the prevalence of gastritis, duodenogastric reflux, and gastro-esophageal reflux has increased, which might perhaps be the cause of the symptoms in PCS. Therefore, it should not come as a surprise if symptoms continue to exist or develop following gallbladder removal.⁷

All symptoms following LC are referred to collectively as "post cholecystectomy syndrome." "Post cholecystectomy syndrome" may be caused by a variety of aetiologies needing various therapies, hence this broad word is insufficient as a diagnostic.⁸ Furthermore, some symptoms have nothing to do with LC at all. The underlying aetiology of symptoms should be investigated in order to determine the source of long-term problems following LC and choose the best treatment to reduce symptoms.⁹ The present study was conducted to assess incidence of post cholecystectomy syndrome in a tertiary care centre.

We found that majority of the subjects belonged to age group 15-30 years (30.6%) followed by 31-40 years (27.3%), 41-50 years (20.8%), 51-60 years (12.2%) and above 60 years (9.0%). There were 17.1% males and 82.9% females. Jaunoo et al¹⁰ did a review on post cholecystectomy syndrome (PCS) which

comprises a heterogeneous group of symptoms and findings in patients who have previously undergone cholecystectomy. Although rare, these patients may present with abdominal pain, jaundice or dyspeptic symptoms. Many of these complaints can be attributed to complications including bile duct injury, biliary leak, biliary fistula and retained bile duct stones. Late sequelae include recurrent bile duct stones and bile duct strictures.

We found that at 1st month follow-up, bloating was seen among 1.2%, Burping among 0.8%, Epigastric pain among 8.2%, indigestion among 1.2%, Loss of appetite among 0.4% and Nausea and Vomiting among 2.4%. Farahmandfar et al¹¹ conducted a review of the prevalence, aetiology, predisposing factors and management of post cholecystectomy diarrhoea from the past study reports. The prevalence of PCD was 9.1% with no significant difference between genders. The prevalence of bile acid malabsorption (BAM), the most important suggested aetiological factor, was seen in 65.5% patients with PCD. There was 92% patients with PCD responded to cholestyramine therapy. The cure rate for cholecystectomy on preoperative cholegenic diarrhoea was 54.5%. The prevalence of post-cholecystectomy new onset constipation was 7.9%. The study had conclusion that BAM prevalence was only 65.5%, however 92% of PCD patients responded to cholestyramine therapy suggesting that cholestyramine therapy could also have curative effect on other unknown aetiological factors related to bile metabolism.

We found that at 2nd month follow-up, epigastric pain was seen among 5.3%, indigestion among 1.2%, and

nausea and vomiting among 0.8%. We found that at 3rd month follow-up, epigastric pain among 0.4%, indigestion among 0.8%, and nausea and vomiting among 0.4%. We found that at 4th month follow-up, epigastric pain among 0.4% and indigestion among 0.4%. We found that at 5th month follow-up, epigastric pain among 1 (0.4%) subject. We found that at 6th month follow-up, epigastric pain among 1 (0.4%) subject. Bansal et al¹² compared the prevalence of post cholecystectomy symptoms (PCSs) between open and laparoscopic cholecystectomy and to find out and investigate the cause of PCSs. Preoperative and postoperative symptoms of 50 Patients (37 females), aged 20 to 79 years, who underwent open cholecystectomy, were prospectively compared questionnaire with those of 50 patients (39 females) aged 16 to 75 years, who underwent laparoscopic cholecystectomy. Patients were followed up for an average of 11 to 12 months. There was no statistically significant difference in prevalence of post cholecystectomy symptoms after open cholecystectomy compared with laparoscopic cholecystectomy (26% v/s 14%, P = 0.134). The study concluded that there was no significant difference in the prevalence of post-cholecystectomy symptoms after open cholecystectomy compared with laparoscopic cholecystectomy. The limitation the study is small sample size.

CONCLUSION

Authors found that after Laparoscopic Cholecystectomy, less than half of patients will experience some symptoms; dyspeptic symptoms are the most frequent and last for quite some months; early signs include biliary and intestinal problems, both of which are temporary. Patients who have experienced acute cholecystitis episodes in the past or who have co-morbid illnesses are more likely to experience prolonged symptoms. Only individuals with persistent symptoms and no clear cause on examination should be classified as PCS since very few patients (less than 1% in the current study) had a discernible cause of symptoms.

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