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Original Research Article

Incidence of Postcholecystectomy Syndrome: A Prospective Study

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Abstract:

Background: The term "post-cholecystectomy syndrome" (PCS) refers to the continuation of right upper quadrant stomach discomfort or biliary colic along with a range of gastrointestinal symptoms that resemble those suffered by patients who had cholecystitis before cholecystectomy. This condition might be a continuation of symptoms brought on by gallbladder pathology or the emergence of new symptoms, as the name implies. Intolerant to fatty foods, heartburn, nausea, vomiting, flatulence, indigestion, diarrhea, jaundice, and sporadic bouts of abdominal discomfort are among the symptoms. Assessing the impact of surgery on patients' symptoms is the purpose of this study.

Methods: This prospective study was conducted at Department of General Surgery, SKMCH, Muzaffarpur, Bihar from August 2023 to February 2024. Total 80 patients undergoing Cholecystectomy were evaluated using standard questionnaires.

Results: The incidence of postcholecystectomy syndrome was reported to be 30% in 80 patients with gallstone disease who had two or more symptoms prior to surgery.

Conclusion: With the exception of diarrhea, all post-operative pain and non-pain symptoms were considerably decreased.

Keywords: Cholecystectomy, cholecystitis , Postcholecystectomy Syndrome.

Introduction

In India, gallstones can lead to a variety of health problems, such as cancer, inflammation, and pain. In northern and northeastern India, gallstones are more common in women than in men.

Gallstone patients may have severe upper-right abdominal discomfort that gradually worsens over the course of 30 minutes to several hours, frequently accompanied by nausea and vomiting. Additionally, a patient may have referred pain beneath the right shoulder region or between the shoulder blades (Boas' sign). Attacks almost always come at night and frequently after a very fatty meal.(1)

Research has already been done in a number of ways to provide less intrusive, costly, and unpleasant ways to treat gallstones. The amount, size, and quantity of stones limit the use of techniques like extracorporeal shock wave lithotripsy, contact dissolution agents like methyl tertbutylene ether (MTBE), and oral desaturation agents like chenodeoxycholic acid and ursodeoxycholic acid.(2)

Furthermore, they preserve a gallbladder that is known to contain lithogenic bile. Therefore, a significant number of gallstone patients cannot benefit from these nonoperative techniques, and they cannot guarantee a long-term recovery from gallstone disease.(3)

Laparoscopic cholecystectomy, which was first performed by Erich Muhe in 1986, has quickly become the preferred treatment for gallstone disease symptoms. Reduced postoperative hospitalization, decreased discomfort and morbidity, improved cosmesis, an earlier return to work, and significant cost savings are some of its benefits over open cholecystectomy.(4)

Materials and Methods

The present study consisted of 80 patients of post cholecystectomy syndrome both genders in department of general surgery, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar from August 2023 to February 2024. All gave their written consent to participate in the study.

Name, age, gender, and other details were noted. USG of the whole abdomen, liver function test, amylase, lipase, and complete blood count were all conducted. All patients underwent a standard four-port LC while under general anesthesia. Following their release, these patients were monitored for six months, and the specifics of the surgery were recorded. If there were any complaints during follow-up, they were noted and looked into only if they continued after a month of surgery. The resulting data were then statistically analyzed. P value < 0.05 was considered significant.

Results

Table 1: Distribution of study population according to age groups

Age groups	No. of cases	Percentage
15-30 years	25	31.25%
31-40 years	21	26.25%
41-50 years	17	21.25%
51-60 years	10	12.50%
Above 60 years	7	8.75%
Total	80	100.0%

Table 1 shows that majority of the subjects belonged to age group 15-30 years (31.25%) followed by 31-40 years (26.25%), 41-50 years (21.25%), 51-60 years (12.50%) and above 60 years (8.75%).

Table 2: Distribution of study population according to sex

Sex	No. of cases	Percentage
Male	14	17.5%
Female	66	82.5%
Total	80	100.0

Table 2 shows that there were 17.5% males and 82.5% females.

Table 3: Distribution of study population according to PCS symptoms in 1st month

1st month postoperative	No. of cases	Percentage
Asymptomatic	65	81.25%
Bloating	2	2.5%
Burping	1	1.25%
Epigastricpain	7	8.75%
Indigestion	2	2.5%
Loss of appetite	1	1.25%
Nausea and vomiting	2	2.5%

Table 3 shows that at 1st month follow-up, bloating was seen among 2.5%, burping among 1.25%, epigastric pain among 8.75%, indigestion among 2.5%, loss of appetite among 1.25% and nausea and vomiting among 2.5%.

Table 4: Distribution of study population according to PCS symptoms in 2nd month

2nd month postoperative	No. of cases	Percentage
Asymptomatic	73	91.25%
Epigastricpain	4	5.0%
Indigestion	2	2.5%
Nausea and vomiting	1	1.25%

Table 4 shows that at 2nd month follow-up, epigastric pain was seen among 5.0%, indigestion among 2.5%, and nausea and vomiting among 1.25%

Table 5: Distribution of study population according to PCS symptoms in 3rd month

3rd month postoperative	No. of cases	Percentage
Asymptomatic	76	95.0%
Epigastric pain	1	1.25%
Indigestion	2	2.5%
Nausea and vomiting	1	1.25%

Table 5 at 3rd month follow-up, epigastric pain among 1.25%, indigestion among 2.5%, and nausea and vomiting among 1.25%.

Table 6: Distribution of study population according to PCS symptoms in 4th month

4th month postoperative	No. of cases	Percentage
Asymptomatic	78	97.5%
Epigastric pain	1	1.25%
Indigestion	1	1.25%

Table 6 shows that at 4th month follow-up, epigastric pain among 1.25% and indigestion among 1.25%.

Table 7: Distribution of study population according to PCS symptoms in 5th month

5th month postoperative	No. of cases	Percentage
Asymptomatic	79	98.75%
Epigastric pain	1	1.25%
Total	80	100.0

Table 7 shows that at 5th month follow-up, epigastric pain among 1 (1.25%) subject.

Table 8: Distribution of study population according to PCS symptoms in 6th month

6th month postoperative	No. of cases	Percentage
Asymptomatic	79	98.75%
Epigastric pain	1	1.25%
Total	80	100.0

Table 8 shows that at 6th month follow-up, epigastric pain among 1 (1.25%) subject.

Discussion

It should not be surprising if symptoms persist or develop after gallbladder removal because cholecystectomy surgery itself is associated with several physiological changes in the digestive system, including hormonal changes that primarily affect the upper digestive system. (5) Additionally, cholecysto-sphincter of Oddi reflex disruption causes cholecysto-antral reflux and cholecysto-oesophageal reflux, which has increased the prevalence of gastritis, duodenogastric reflux, and gastro-esophageal reflux, which may be the cause of the symptoms in PCS. (6)

In order to identify the cause of long-term issues after LC and determine the best course of action to alleviate symptoms, the underlying aetiology of symptoms should be examined. (8) The current study was carried out to assess incidence of post cholecystectomy syndrome in a tertiary care center. (7) Additionally, all symptoms after LC are referred to collectively as "post cholecystectomy syndrome." This broad term is insufficient as a diagnostic because "post cholecystectomy syndrome" may be caused by a variety of aetiologies requiring various therapies, making it insufficient as a diagnostic.

The majority of the individuals (31.25%) were in the 15–30 age group, followed by those in the 31–40 (26.25%), 41–50 (21.25%), 51–60 (12.50%), and over-60 (8.75%) age groups.Of them, 82.5% were female and 17.5% were male. A review of post-cholecystectomy syndrome (PCS), which is a diverse collection of symptoms and findings in individuals who have had cholecystectomy in the past, was conducted by Jaunoo et al. (9). Despite being uncommon, these patients may exhibit signs of dyspepsia, jaundice, or abdominal pain. Bile duct damage, biliary leak, biliary fistula, and retained bile duct stones are among the consequences that can be linked to several of these problems. Bile duct strictures and recurring stones are examples of late sequelae.

We found that at 1st month follow-up, bloating was seen among 2.5%, Burping among 1.25%, Epigastric pain among 8.75%, indigestion among 2.5%, Loss of appetite among 1.25% and Nausea and Vomiting among 2.5%. Farahmandfar et al(10) 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 5.0%, indigestion among 2.5%, and nausea and vomiting among 1.25%. We found that at 3rd month follow-up, epigastric pain among 1.25%, indigestion among 2.5%, and nausea and vomiting among 1.25%.We found that at 4th month follow-up, epigastric pain among 1.25% and indigestion among 1.25%.We found that at 5th month follow-up, epigastric pain among 1 (1.25%) subject. We found that at 6th month follow-up, epigastric pain among 1 (1.25%) subject. Bansal et al(11) 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).

Conclusion

The study found that the prevalence of post-cholecystectomy complaints following open versus laparoscopic cholecystectomy did not differ significantly.

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