



POST CHOLECYSTECTOMY SYNDROME: A CLINICAL EVALUATION

General Surgery

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ABSTRACT

Post-cholecystectomy syndrome is the presence of abdominal symptoms (abdominal pain, dyspepsia, gastritis, bloating, diarrhea, etc.) after removal of gallbladder which is the complication of cholecystectomy. These symptoms can be transient, persistent or lifelong. The most common etiological factors of post-cholecystectomy syndrome are extra biliary disorders (reflux oesophagitis, peptic ulcer, IBS, etc.). It is estimated that the bile duct injuries are the major complication of laparoscopic cholecystectomy. The present observational study was undertaken to understand the pathophysiology of post cholecystectomy syndrome along with preventing and relieving the symptoms effectively by conservative or surgical interventions. A total of 50 patients who underwent cholecystectomy were included in the study. The age of the patients ranges from 10 years to 80 years with an average age of 40 years. The male to female ratio was 2.33:1. Study subjects had received pharmacological treatment (50%), followed by 30% did not received any treatment, diagnostic endoscopy and surgical management (10%). It was concluded that patients after cholecystectomy needs to be examine and screen thoroughly to determine the other possible complications such as post-operative syndrome to rule out and treat at earliest stages.

KEYWORDS

Gallstone, Post-operative, Cholecystectomy, Abdominal problem and Surgical intervention.

INTRODUCTION

Gallstones is the commonest problem of gastrointestinal tract. Cholelithiasis or gall stones are the presence of hardened deposits of digestive fluid in the gall bladder composed of bile, bilirubin and cholesterol. The management of gallstones depends on symptoms of patients. Cholecystectomy is the common treatment of symptomatic gallstones.¹

Post-cholecystectomy syndrome is the presence of abdominal symptoms (abdominal pain, dyspepsia, gastritis, bloating, diarrhea, etc.) after removal of gallbladder which is the complication of cholecystectomy. These symptoms can be transient, persistent or lifelong.^{2,3}

The incidence of post-cholecystectomy syndrome is 43% among female and 28% among male.^{4,5}

The most common etiological factors of post-cholecystectomy syndrome are extra biliary disorders (reflux oesophagitis, peptic ulcer, IBS, etc.). It is estimated that the bile duct injuries are the major complication of laparoscopic cholecystectomy.^{6,7}

Thus, the present study was undertaken to understand the pathophysiology of post cholecystectomy syndrome along with preventing and relieving the symptoms effectively by conservative or surgical interventions.

MATERIAL AND METHODS

This prospective observational study was conducted in the Post graduate Department of Surgery, ASCOMS, Jammu for a period of six months after obtaining the ethical permission from the institution.

A total of 50 patients who underwent cholecystectomy were clinically evaluated to diagnose and manage the post-cholecystectomy syndrome after obtaining the informed consent.

A detailed history was collected, clinical examination and follow up was done. Demographic data was collected (age, gender, pre-operative symptoms, post-operative symptoms, etc.).

Data was organized, tabulated, analyzed and interpreted in both descriptive and inferential statistics i.e. frequency and percentage distribution, mean by using statistical package for social science software (SPSS), version 22.0. Categorical variables were expressed as number and percentage.

OBSERVATION AND RESULTS

Table 1: Age

Age group	N	%
1-10	2	4
11-20	5	10
21-30	8	16
31-40	18	36
41-50	10	20
51-60	2	4
60-70	2	4
70-80	3	6
80-90	0	0

The age of the patients ranges from 10 years to 80 years with an average age of 40 years as shown in table and figure 1.

Table 2: Gender

Age group	N	%
Males	35	70
Females	15	30

Table 2 showed that the most of the patients were males 70% followed by 30% females. The male to female ratio was 2.33:1.

Table 3: Treatment

Treatment	N	%
No treatment	15	30
Pharmacological aid	25	50
Diagnostic endoscopy	5	10
Surgical management	5	10

Table 3, presented that most of the study subjects had received pharmacological treatment (50%), followed by 30% did not received any treatment, diagnostic endoscopy and surgical management (10%).

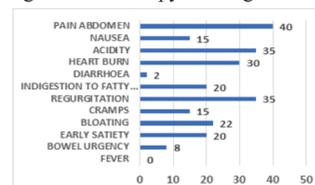


Figure 1. Pre-operative Symptoms

It was found that the most of patients were suffering from pain in abdomen (40%), followed by acidity and regurgitation (35% respectively), heart burn (30%), bloating (22%), indigestion of fatty foods and early satiety (20%), cramps (15%), bowel urgency (8%) and diarrhea (2%) as shown in figure 1.

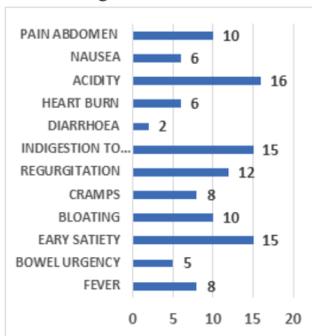


Figure 2. Symptoms At 7th Post-operative Day

On 7th post-operative day most of patients had acidity (16%), indigestion of fatty foods and early satiety (15% respectively), regurgitation (12%), pain in abdomen and bloating (10% respectively), cramps and fever (8%), nausea and heart burn (6% respectively), bowel urgency (5%) and diarrhea (2%) as shown in figure 2.

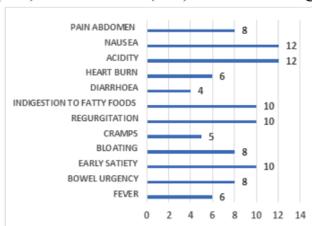


Figure 3. Symptoms 1-month Post-cholecystectomy

After 1 month of post-operative phase most of patients had nausea and acidity (12% respectively), indigestion of fatty foods, regurgitation and early satiety (10% respectively), pain in abdomen, bowel urgency and bloating (8% respectively), heart burn and fever (6% respectively), cramps (5%) and diarrhea (5%) as shown in figure 3.

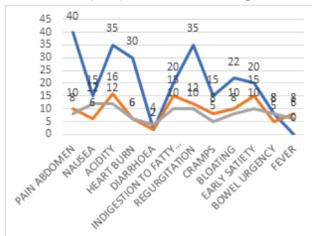


Figure 4. Pre-operative Day, 7th Post-operative Day And After 1 Month Pod

On comparison of pre-operative, 7th post-operative and after 1 month of operation it was reported that there was significant difference in the patients manifestations as shown in figure 4.

DISCUSSION

The present prospective observational study evaluated 50 patients with post-cholecystectomy syndrome. The data was analyzed and discussed with previous literature.

The age of the patients ranges from 10 years to 80 years with an average age of 40 years and the most of the patients were males 70% followed by 30% females. The male to female ratio was 2.33:1. These findings are consistent with the study conducted by Saleem S et al., (2012) reported that the most of the study participants (20%) were in the age group of 30-39 years. In the another study conducted by Shirha BH et al., (2018) found that the mean age of the study subjects were 37.41±7.12 years and the majority of the subjects were males. The male to female ratio was 1:1.45.^{8,9}

In our study most of the patients had received pharmacological treatment (50%), followed by 30% did not received any treatment, diagnostic endoscopy and surgical management (10%). The results

are comparable with the study conducted by Shirah BH et al., (2018) reported that the patients with post-cholecystectomy syndrome were managed with supportive treatment.⁹

It was found that the most of patients were suffering from pain in abdomen (40%), followed by acidity and regurgitation (35% respectively), heart burn (30%), bloating (22%), indigestion of fatty foods and early satiety (20%), cramps (15%), bowel urgency (8%) and diarrhea (2%). On 7th post-operative day most of patients had acidity (16%), indigestion of fatty foods and early satiety (15% respectively), regurgitation (12%), pain in abdomen and bloating (10% respectively), cramps and fever (8%), nausea and heart burn (6% respectively), bowel urgency (5%) and diarrhea (2%). After 1 month of post-operative phase most of patients had nausea and acidity (12% respectively), indigestion of fatty foods, regurgitation and early satiety (10% respectively), pain in abdomen, bowel urgency and bloating (8% respectively), heart burn and fever (6% respectively), cramps (5%) and diarrhea (5%).

These findings are correlated with the study carried out by Khatana PS et al., (2018) categorized the patients into two groups, group I was symptomatic post-cholecystectomy and Group II symptomatic post-cholecystectomy. The reported pre-operative symptoms in group I was flatulent dyspepsia (82.3%) followed by RHQ pain (76.4%), nausea / vomiting (47.05%), epigastric pain (41.17%) and jaundice (5.8%). The patients in group II had flatulent dyspepsia (90.5%) followed by RHQ pain (80%), nausea / vomiting (32.9%), epigastric pain and jaundice (7.05% respectively). In another study performed by the Shirah BH et al., (2018) found that the most common presenting symptoms was right upper quadrant abdominal pain (72.4%) followed by nausea (50.7%), vomiting (33.5%), dyspepsia (30.5%), abdominal colic (23.5%), fever (13.6%) and the presenting sign was right upper quadrant abdominal tenderness (45.9%), jaundice (17.6%), generalized abdominal tenderness (14.3%) and epigastric tenderness (8%).^{9,10}

CONCLUSION

The present observational study observed that post cholecystectomy syndrome is a common problem after cholecystectomy. Most of the patients are relieved of symptoms without any treatment in the immediate post operative period or in a little time following surgery. It was concluded that patients after cholecystectomy needs to be examine and screen thoroughly to determine the other possible complications such as post-operative syndrome to rule out and treat at earliest stages.

REFERENCES

1. Tanaja J, Lopez RA, Meer JM. Cholelithiasis. [Updated 2022 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK470440>.
2. Schofer JM. Biliary causes of postcholecystectomy syndrome. J Emerg Med. 2010;39:406-410.
3. Jaunoo SS, Mohandas S, Almond LM. Postcholecystectomy syndrome (PCS) Int J Surg. 2010;8:15-17.
4. Redwan AA. Multidisciplinary approaches for management of postcholecystectomy problems (surgery, endoscopy, and percutaneous approaches) Surg Laparosc Endosc Percutan Tech. 2009;19:459-469.
5. Madacsy L, Dubravcsik Z, Szepes A. Postcholecystectomy syndrome: from pathophysiology to differential diagnosis - a critical review. Pancreat Disord Ther. 2015;5:162.
6. M.A. Rogy, R. Fugger, F. Herbst, F. Schulz. Reoperation after cholecystectomy. The role of the cystic duct stump. HPB Surg. 4 (1991), 129-135.
7. P.D. Thurley, D. Rajpal. Laparoscopic cholecystectomy: postoperative imaging. AJR, 191 (2008),794-801.
8. Saleem S, Weissman S, Gonzalez H, Rojas PG, Inayat F, Alshati A, et al. Post-cholecystectomy syndrome: a retrospective study analysing the associated demographics, aetiology, and healthcare utilization. TGH. 2021.
9. Shirah BH, Shirah HA, Zafar SH, Albeladi KB. Clinical patterns of postcholecystectomy syndrome. Ann Hepatobiliary Pancreat Surg. 2018 Feb;22(1):52-57.
10. Khatana PS, Kumar J, Sharma DK. Evaluation of patients undergoing cholecystectomy with special reference to post-cholecystectomy syndrome. Int Surg J. 2018 Jun;5(6):2316-2321.