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EVALUATION OF CLINICAL PROFILE AND OUTCOME OF POSTCHOLECYSTECTOMY SYNDROME

Surgery

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ABSTRACT

Gall stones affect about 10% of people in Western society and are one of the most common disorders of the gastrointestinal tract[1]. In 1986 Muhee introduced laparoscopic cholecystectomy, it has gained popularity and is now considered the treatment of choice for symptomatic gallstone disease. It has various advantages over open cholecystectomy like reduced postoperative hospital stay, reduced pain and morbidity, better cosmesis, early return to work and reduced financial burden on patients[2]. Crider first described Post Cholecystectomy Syndrome, defining it as "the presence of symptoms after cholecystectomy"[3]. It can be due to biliary or extra biliary causes. Being in an era of laparoscopic surgeries, we need to study and understand Postcholecystectomy Syndrome (PCS) which poses a diagnostic and therapeutic challenge. The present study was done to evaluate the clinical profile, and outcome of Post cholecystectomy Syndrome. This is a prospective study 0f 300 patients who underwent LC. Out of 300 LC patients, persistent symptoms were seen in 62 patients on post operative day (POD) 7, it reduced to 46 patients on POD 30 and 12 patients on 3 months follow up. PCS was common in females. Dyspepsia was the most common symptom reported after surgery and it was the only symptom that persisted even after symptomatic treatment. Cause of PCS was found in 20 patients which included common bile duct (CBD) injury in 1 patient, bilioma in 2 patients, CBD stone in 3 patients, Pancreatitis in 3 patients, Duodenal ulcer in 2 patients, Gastric ulcer in 3 patients, Pyloric stenosis in 1 patient, GERD in 1 patient, Right renal stone in 1 patient, Right ureteric stone with hydronephrosis in 1 patient, Subhepatic abscess in 1 patient and epigastric post site infection in 1 patient. In 11 patients appropriate intervention was done and in 9 patients conservative treatment was given. Persistent symptom (dyspepsia) was seen in 12 patients at the end of 3 month follow up. PCS is a major cause of morbidity even after successful LC. The incidence of PCS can be reduced by a systematic approach to patients with gall stone disease and proper preoperative counseling about the possibility of persistence of nonspecific symptoms.

KEYWORDS

Laparoscopic cholecystectomy, Postcholecystectomy Syndrome, dyspepsia.

INTRODUCTION

Gall stones affect about 10% of people in Western society and are one of the most common disorders of the gastrointestinal tract[1]. In 1986 Muhee introduced laparoscopic cholecystectomy,it has gained popularity and is now considered the treatment of choice for symptomatic gallstone disease. It has various advantages over open cholecystectomy like reduced postoperative hospital stay, reduced pain and morbidity, better cosmesis, early return to work and reduced financial burden on patients[2].

Up to15-20 % of cholecystectomy patients, continue to have a variety of gastrointestinal symptoms.In 1947, Womack and These said that these symptoms may be either due to continuation of symptoms that had been interpreted as resulting from pathology of gallbladder or the development of new symptoms that might normally be attributed to the gall bladder. Crider first described Post cholecystectomy Syndrome as "the presence of symptoms after cholecystectomy"[3].

The primary reported extrabiliary causes of PCS in literature include other coexisting diseases like acute/chronic pancreatitis (and its complications), pancreatic tumors, hepatitis, esophageal diseases, peptic ulcer disease, etc. The importance of studying PCS lies in the fact that even after a successful laparoscopic cholecystectomy, patients face similar symptoms which can be distressing [4]. In 85% of the cases, Postcholecystectomy syndrome was caused by alteration of bile flow due to loss of the gallbladder's reservoir function after cholecystectomy. This increased bile flow into the upper gastrointestinal tract, thus causing esophagitis and gastritis. Within the lower gastrointestinal tract, it can cause diarrhea[5].

Being in an era of laparoscopic surgeries, we need to study and understand PCS which poses a diagnostic and therapeutic challenge. The present study was done to Evaluate the clinical profile, and outcome of PCS.

MATERIALS AND METHODS

The study has been conducted over one year time period (December 2018 to December 2019) with follow up of 3 month in Shri Guru Ram Rai Institute Of Medical And Health Sciences and associated Shri Mahant Indiresh Hospital, Dehradun. All patients who underwent Laparoscopic Cholecystectomy have been included in this study. All eligible patients were properly counseled and explained about the nature and purpose of the study. An informed written consent was taken before recruiting patients into the study. The study has been conducted after approval by the Institutional Ethics Committee.

Patients were evaluated by proper history, clinical examination, necessary investigations (as per requirement), preoperative and intraoperative factors. Patients were followed up after surgery for presence of any persisting or/and new symptoms on POD 7, 30, and postoperative 3 months. Patients with any symptoms that can be attributed to gall bladder disease on follow up were labelled as PCS. They were evaluated for possible causes, given symptomatic and definitive treatment wherever applicable and outcomes were recorded.

RESULTS

In the present study, out of 300 patients there were 80 (26.7%) males and 220 (73.3%) females.225 (75%) patients were admitted from OPD and 75 (25%) from Emergency.

On preoperative ultrasound, multiple gall bladder stones was seen in 208(69.3%) patients and single stone in 92(30.7%) patients, increased gall bladder wall thickness (>3 mm) was seen in 39 (13.0%) patients, dilated CBD (>8 mm) was seen in 18 (6.0%) patients, 37 (12.3%) patients showed presence of pericholecystic fluid. During surgery, calot's triangle anatomy was unclear in 71(24%) patients, and clear in 229 (76.3%) patients. While adhesions were found in 95 (31.7%) patients out of 300 patients.

On POD 7, 62 out of 300 patients were symptomatic, Pain abdomen was seen in 24 (38.7%) patients. Dyspepsia was the most common symptom seen in 51 (82.2%) patients.

Table 1 : Number Of Patients Showing Symptoms On Follow Up

Cause	Frequency (n = 20)	Percent
Bilioma	1	5.0%
CBD injury	2	10.0%
CBD stone	3	15.0%
DU	2	10.0%
GERD	1	5.0%
GU	3	15.0%
Pancreatitis	3	15.0%
Port site abscess	1	5.0%
Pyloric stenosis	1	5.0%

Renal stone	1	5.0%
Renal ureter stone+HDN	1	5.0%
Subhepatic abscess	1	5.0%

Other symptoms included nausea was seen in 19 (30.6%) patients, Jaundice was seen in 2 (3.22%) patients and fever was seen in 1 (1.6%) patient. The number of patients having symptoms reduced from 62 patients on follow up on POD 7 and 46 on POD 30.

Dyspepsia was reduced from 51 patients on POD 7 to 33 patients on POD 30 by conservative treatment on proton pump inhibitors. Dyspepsia was still the most common symptom on POD 30. Pain abdomen reduced from 24 patients on POD 7 to 15 patients on POD 30. Nausea was reduced from 19 patients on POD 7 to 16 patients on POD 30 by conservative treatment on proton pump inhibitors.

Table 2 : Causes of PCS

	Post operative day 7	Post operative day 30	Post operative 3 months
Asymptomatic	238	254	288
Symptomatic	62	46	12

However, Jaundice was increased from 2 patients on POD 7 to 6 patients on POD 30. Fever was also increased from 1 patient on POD 7 to 6 patients on POD 30.

All symptomatic patients on POD 30 underwent Liver Function tests and USG abdomen. Abnormal USG abdomen was seen in 12 (26.1%) patients. Out of these 12 patients, abnormal LFTs were seen in 7 (15.2%) patients and normal LFTs in 5 patients. Out of 15 patients with pain abdomen on post operative day 30, LFTs were abnormal in 4 patients and normal in 11 patients while USG abdomen was normal in 6 patients and abnormal in 9 patients.

Out of 46 patients symptomatic on POD 30, USG abdomen showed bilioma formation in 2 (4.3%) patients. MRCP was done in both patients. In one patient MRCP showed normal biliary tree anatomy. Bilioma was drained under USG guidance. Patient responded well.In second patient with bilioma on USG abdomen, MRCP showed CBD injury (Strausberg type D). In this patient ERCP was done and CBD stent was placed. Patient responded well to treatment.

On POD 30, USG abdomen showed CBD stones in 3 (6.5%) patients. All 3 patients with CBD stones were treated with ERCP and CBD stenting with CBD clearance achieved in all 3 patients.

On POD 30, USG abdomen showed bulky pancreas s/o pancreatitis in 3 (6.5%) patients. Patients were followed with Serum Amylase/Lipase levels which were increased confirming diagnosis of Pancreatitis. Both patients were managed conservatively and improved.

On POD 30, USG abdomen showed right renal stone in 1 (2.2%) patient and right ureteric stone with hydronephrosis in 1 (2.2%) patient. Both renal and ureteric stones were newly diagnosed in post operative period. Both patients were consulted with urologist and IVP was done. Both underwent PCNL and improved.

Out of 46 patients, 1 (2.2%) patient showed collection in subhepatic region. On USG guided aspitation pus collection was seen and patient diagnosed as a case of Subhepatic Abscess. USG guided drain was placed in subhepatic space and conservative treatment started. Patient responded well to treatment.

Out of 46 patients, in 1 (2.2%) patient USG abdomen showed collection at epigastric post site. Port site scar was opened and minimal purulent collection was seen. Wound was cleaned and patient managed conservatively with daily dressings. Patient responded well to treatment.

Out of 46 patients, 34 patients had normal LFTs and USG abdomen. Out of these 34 patients, UGIE was done in 28 patients having pain abdomen and/or dyspepsia.

Out of 7 patients, UGIE showed Gastric ulcer in 3 (10.7%) patients, Duodenal ulcer was seen in 2(7.1%) patients. In 1(3.6%) patient pyloric stenosis (partial) was seen. While in one patient GERD (3.6%) was diagnosed on UGIE endoscopy which was later confirmed by 24 hour pH monitoring. All these 6 patients were given conservative treatment. 1 patient with pyloric stenosis required Endoscopic dilatation. All patients responded well to treatment.

At the end of 3 months, number of patients having symptoms were reduced to 12 patients. Dyspepsia was found as the most common symptom present in all 12 (100%) patients.

On evaluation, definite cause for PCS was found in only 20 patients - 6 patients with biliary causes and 14 patients with non biliary causes.

DISCUSSION

PCS is a sigmificant cause of morbidity even after a successful LC. In world literature, incidence of PCS varies widely between 5% to 63%[6-7]. In current study, we learn that most patients with specific features of gall stone disease showed improvement in symptoms after surgery. Biliary symptoms present early and mostly require intervention. Patients with gall stone disease with predominant epigastric pain and dyspepsia should be subjected to UGIE before laparoscopic cholecystectomy to rule out peptic ulcer disease which is an important cause of PCS.

Persistent symptoms of PCS after 3 months,were mostly non specific in nature. Therefore, patients who present to hospital with gall bladder disease and predominantly associated non specific symptoms, should be counselled before surgery about the chances of persistence of non specific symptoms even after surgery.

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