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Case Report

Postcholecystectomy syndrome: a case report

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ABSTRACT

The term postcholecystectomy syndrome (PCS) refers to varied signs and symptoms attributed to patients on cholecystectomy for the surgical management of symptomatic gallstone disease. This complication occurs as a result of a pathological condition of the gallbladder or attribution of several symptoms. PCS affects about 10-15% of the patients. The management and treatment of PCS associated symptoms are depending on the specific diagnosis and may include pharmacological or surgical management. In the present case, a 74-year-old man undergone for laparoscopic cholecystectomy admitted with complaints of loose stools for several times with other complications (anaemia, leucocytosis, neutrophilia, and also reported known case of trigeminal neuralgia). The present case report added insight information on PCS and its therapeutic management.

Keywords: Postcholecystectomy syndrome, Cholecystectomy, Gall bladder, Gall stone disease

INTRODUCTION

Cholelithiasis is the medical parlance for gallstone disease and it is a common disorder of the biliary tract. Nearly 10-15% of the adult population in developed countries have reported gall stones.[1] Cholecystectomy is the most typical surgical operation for symptomatic gallstone disease and laparoscopic cholecystectomy is the 'gold standard' alternative for it. In the face of greater success rates with the procedure, approximately 10-20% of the patients report having post-surgical symptoms.[2] The term postcholecystectomy syndrome (PCS) is referred to as the presence of signs and symptoms after an interventional cholecystectomy.[3] The definition is not explained elsewhere and sometimes mixed up with extra biliary disorders if they cause symptoms similar to post-cholecystectomy.

PCS symptoms may trigger early in the post-operative period or sometime later after weeks or sometimes takes months to develop and associated with several disorders.[1] Also classified into either biliary or non-biliary, however, both reported with equal incidence rate. Besides, there is little proof to suggest anything concerning their origin. The most common biliary cause would be ductal calculi and when the presenting symptoms are just like the preoperative ones, then non-biliary etiology or extra biliary disorders should be considered.[4] Generally, PCS occurs due to the modifications in bile flow owing to loss of the reservoir function of the gall bladder as a result of which patients report to have mild gastroduodenal symptoms of diarrhoea.[3] The management of PCS is usually symptomatic based on the cause.[5]

CASE REPORT

A 74-year-old man admitted with complaints of frequent loose stools (around four to five episodes per day with watery consistency for a week) with abdominal pain had undergone laparoscopic cholecystectomy ten days before the initial appearance of these symptoms. He had a history of fever with chills and rigor for five days. Also, a known case of trigeminal neuralgia for which he had received gabapentin at a dose of 300 mg twice a day. He had also taken a course of antibiotics (tablet cefuroxime 500 mg twice a day) and tablet paracetamol 650 mg twice a day.

His vital signs appeared to be normal except for fever with a slightly elevated pulse rate of 98 beats per minute. He appeared to be dehydrated with mild tenderness over the right lumbar region along with scars from his recent cholecystectomy surgery. Laboratory investigation of the haematological analysis revealed that the patient was anaemic with leucocytosis and neutrophilia (Table 1). His platelet levels were also high along with the liver enzymes alkaline phosphatase, gamma-glutamyl transferase, and lactate dehydrogenase (indicating an issue with the liver). Direct bilirubin was mildly elevated with a decrease in albumin level (Table 1). The provisional diagnosis was suspected to be acute gastroenteritis. The patient had managed with intravenous (IV) fluids, antibiotics, and analgesics over the next four days (Table 2). On discharge, the patient was comfortable, oriented, his fever went down, he did not report to had any frequency of loose stools and the tenderness over the abdomen and got improved.

Table 1: Laboratory values of various parameter investigated.

Parameter	Observed value	Reference value
Haemoglobin (g/dl)	12.4	13-17
Red blood cell (cells/µl)	4.05	4.5-5.9 x 10^6
Packed cell volume (%)	38.4	40-52
Platelet count (/µl)	484	150-400 x 10^3
Mean platelet volume (fl)	6.7	7.2-11.4
Total bilirubin (mg/dl)	0.87	0.2-1
Direct bilirubin (mg/dl)	0.42	<0.2
Indirect bilirubin (mg/dl)	0.45	0.2-0.8
Albumin (g/dl)	3.0	3.5-5
Globulin ((g/dl))	3.4	2.3-3.4
Albumin/globulin ratio	0.9	>1
White blood cell (cells/µl)	12.8	4-10 x 10^3
Neutrophil (%)	77	55-70
Eosinophil (%)	1	1-4
Lymphocyte (%)	14	20-40
Monocyte (%)	8	2-8
SGOT (AST) (U/l)	27	5-30
SGPT (ALT) (U/l)	23	5-30
Alkaline phosphatase (U/l)	161	50-100
Gamma-glutamyl transferase (U/l)	105	6-50
Lactate dehydrogenase (U/l)	207	50-150
Total protein (g/dl)	6.4	6.4-8.3

Table 2: Therapeutic management of post-cholecystectomy syndrome and other compilations.

Drug	IV Ringer Lactate (IV fluid) at 75mL/hr.
Injection paracetamol	1 g IV stat and then t.d.s till day 2; tablet 650 mg BD continued from day 3
Injection esomeprazole	40 mg IV stat; tablet 40mg BD then given on day 3 and continued for five days
Injection hyoscine	20 mg stat and then given as slow IV BD for the first two days
Injection piperacillin and tazobactam	4.5 mg t.d.s till day 2
Tablet loperamide	2 mg given on the first day after a symptom of loose stools
Tablet gabapentin	Continued (already taken for trigeminal neuralgia)
Tablet ultracet	Given BD from day 3; s.o.s added on discharge
Tablet becosules (multivitamin)	o.d. added on day 3 and continued for five days added on discharge
Tablet cefixime	200 mg BD for five days was added on discharge

IV- intravenous, t.d.s- thrice a day, BD - twice a day, od-once a day, s.o.s:-whenever necessary

DISCUSSION

There is very little data regarding PCS reported from India. Two separate reports suggest an incidence of 18.13% and 27%, thereby inferring that the incidence rate of PCS may be variable across the country.[1,3] Probably, it is not as uncommon as it is assumed to be, providing hopes for future domestic research in this particular diagnosis.

Cholecystectomy (either open or laparoscopic surgery) is accepted for the treatment of symptomatic gallstone diseases, which is elevated in approximately 85% of cases. Studies suggested that about 5% of the people who underwent dissection of gall bladders continue to have reported with symptoms such as diarrhoea, loose stool, vomiting, and dyspepsia.[6]

Diarrhoea as a post-surgical complication has been reported due to the limited ability of the small intestine in absorbing the bile, it is secreted continuously from the liver as steady and trickle. As a result, bile acids enter the colon causes diarrhoea and occasionally, abdominal pain. This was referred and reported to as bile acid malabsorption (BAM) and the diarrhoea was reported as bile acid diarrhoea or BAD.[7]

In the present case, the patient presented with typical symptoms of PCS such as diarrhoea, loose stools, and abdominal pain. His laboratory investigations provided support to the diagnosis. However, it is known that liver enzymes are elevated after surgical cholecystectomy, which could be due to increased intra-abdominal pressure, squeeze pressure effect on the liver, immoderate use of diathermy, pulling on the gallbladder, or passage of micro calculi into the bile duct.[8]

Further, the patient had low hemoglobin indicated as anemia, it was reported as a common condition in most of the individuals with abnormal liver disorders. Also, it was previously reported in a case with hemolytic anemia followed by routine cholecystectomy.[9]

The level of albumin decreased may be due to the result of dehydration and, increased white blood cell count may be due to the presence of infection. Many individuals reported to had post cholecystectomy syndrome with complications such as biliary obstruction often resulted in surgery or the usage of non-invasive techniques such as magnetic resonance cholangiopancreatography (MRCP). However, reported that most cases were mild. Further, in the present case, the simple symptomatic management protocol was followed. Administered IV fluids to rehydrate the patient and avoid excess fluid loss due to continuous diarrhoea. To combat infection, two different broad-spectrum antibiotics of different classes (penicillin and cephalosporins) were given for seven days.

However, in a previous study report, it was observed that the chronic abdominal pain and diarrhoea in PCS patients was common due to the enhanced abundance of the gut microbiome (proteobacteria) and might be a highly pathogenic risk factor for diarrhoea.[10] The complaints of pain managed with the administration of analgesics such as paracetamol, tramadol, and diarrhoea were controlled by using antispasmodics such as hyoscine and loperamide. Hence, the present case provided evidence for simple management protocol and sufficient information to manage and treat the patient symptoms with the PCS.

Another complication of post-laparoscopic cholecystectomy is Mirizzi syndrome, which occurs due to the usage and the migration of polymer laparoscopic clips. However, it was reported rare complaints.[11,12]

CONCLUSION

The present case report provided insight information on basic therapeutic management considering the symptoms of the postcholecystectomy syndrome and its outcome.

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