CASE REPORT OPEN ACCESS

Post-cholecystectomy Syndrome and its Management

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ABSTRACT

Post-cholecystectomy syndrome (PCS) presents with a wide range of symptoms in patients, mostly women, after surgery with an occurrence of 5 - 63% depending on the years of data collection. We present here a case series with four cases where the symptoms began as early as one year and as late as 9 years following cholecystectomy. The general principle of treatment followed for each case included initial hematological investigations, ultrasonography, Magnetic Resonance Cholangio-pancreatography (MRCP) and Endoscopic Retrograde Cholangio-pancreatography (ERCP) and open cholecystectomy depending on the findings.

Key words Post-cholecystectomy Syndrome, Cystic duct stump, Gallbladder Remnant, Completion cholecystectomy.

INTRODUCTION:

Recurrence of right upper quadrant pain in patients with post-cholecystectomy status requires thorough evaluation as they may be suffering from post-cholecystectomy syndrome caused by the retention of a stone in the remnant of cystic duct as well as gallbladder. According to Kar et al cholecystectomy reportedly provides absolute alleviation of symptoms in 85% of cases, while 15% may have recurrences regardless of cause.[1,2] The latter is referred to as PCS.[3]

In cases with established PCS with ultrasonographic evidence, the approach is to perform MRCP to assess whether there is merely a cystic duct remnant or if the remnant is associated with part of gallbladder. In the presence of the cystic duct ERCP should be performed while if there is a remainder part of the gallbladder, completion cholecystectomy should be carried out.[4,5] We present a case series involving four patients with a history of cholecystectomy with recurring symptoms.

Case 1:

A 50-year-old female, with a history of cholecystectomy five years prior to presentation, presented with right upper quadrant abdominal pain for two years. The pain was colicky, gradually becoming severe and with radiation to the shoulder associated with nausea and a few episodes of vomiting. The patient had evidence of multiple inconclusive ultrasounds and her symptoms were refractory to medicines. On examination abdomen was soft, non-tender, with no visceromegaly. Murphy's sign was negative.

Initial hematological investigations were within normal limits. An abdominal CT scan showed a partially distended gallbladder with a 0.6cm calculus lodged in the lumen, suggestive of cholelithiasis. Relatively reduced attenuation of the hepatic parenchyma suggestive of fatty infiltration of an otherwise normal sized liver with regular margins also reported. A re do cholecystectomy was performed and the remnant of the gallbladder had few calculi fixed within it. Multiple adhesions of the residual gallbladder with the omentum were found. Patient was discharged on the second postoperative day and at follow up no recurrence of symptoms reported.

Case 2:

A 34-year-old female presented with right upper quadrant abdominal pain, colicky in nature, beginning in the epigastrium and radiating to the back. It was intermittent and was there for thirteen years. The patient underwent a partial cholecystectomy nine years prior, due to the presence of adhesions after which the patient was asymptomatic for four years. The pain recurred four years post-surgery, associated with obstructive jaundice with choledocholithiasis, for which exploration via ERCP was performed. After being discharged three days post ERCP, the pain

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recurred which was severe and constant associated with episodes of vomiting. ERCP was repeated within one week for a calculus in the common bile duct that might have been retained earlier. Three years later, the patient experienced moderate abdominal pain for which she was kept on conservative management with relief.

At presentation to our facility patient had severe right upper quadrant pain accompanied with nausea for eleven days. On examination abdomen was soft, tender in right hypochondrium, and Murphy's sign positive. Ultrasound whole abdomen showed a possibility of dilated cystic duct with calculus or remnant of gallbladder. MRCP showed a calculus in the cystic duct stump, with no evidence of choledocholithiasis. Completion cholecystectomy along with choledochotomy was planned. Peroperatively there was cystic duct remnant containing calculi. Excision of the cystic duct remnant was done close to the CBD. Postoperative course was unremarkable and she was discharged on the third postoperative day.

Case 3:

A 40-year-old female, with history of laparoscopic cholecystectomy one year back presented with severe right hypochondrium pain along with multiple episodes of vomiting two days prior to the presentation. Pain was acute in onset and pricking in nature, radiating to the back. Ultrasound of whole abdomen showed calculi within the CBD, following which ERCP was attempted but no success made. Choledochotomy with stone extraction was performed with T-tube insertion. Postoperatively she was discharged on the third postoperative day. T-tube was removed 10 days later after a T-tube cholangiogram which showed no abnormality.

Case 4:

A 52-year-old male with the history of cholecystectomy five years back presented with epigastric and right hypochondrium pain, vomiting, and recurrent history of fever for six weeks. Pain was gradual in onset, intermittent and pricking in nature. Undocumented, low-grade fever with rigors aggravating with pain and subsiding thereafter was also reported. On examination patient was ill looking, deeply jaundiced and dehydrated. Abdomen was soft, tender in right hypochondrium, with no visceromegaly. Ultrasound abdomen showed choledocholithiasis. ERCP was done and stones along with sludge removed and sphincterotomy done. Occluding cholangiogram was done which appeared normal. Post-ERCP liver function tests returned to normal and patient was discharged with no complaints at follow up.

DISCUSSION:

PCS encompasses variable symptoms similar to those experienced before a cholecystectomy. PCS may be categorized in to biliary and extra biliary type. Biliary causes originate from biliary leakage or strictures, retained or recurrent calculi in the biliary tree, cystic duct remnant, dyskinesia of the sphincter of Oddi or rarely, amputation neuroma around the surgical bed. Biliary causes may further be classified according to the time of presentation; within 2 years of surgery and after this threshold, respectively, early and late. Early PCS presents due to postoperative complications such as a cystic duct or gallbladder remnant, residual CBD calculi and biliary leak while late PCS may occur due to formation of biliary strictures, persistent CBD calculi as well as chronic inflammation because of cystic duct or gallbladder remnant.[6]

In laparoscopic cholecystectomy due to restricted exposure and access there is a chance of leaving a cystic duct stump. This left over stump may presents as a locus for inflammation with or without presence of calculi. These calculi may be remnant of previous left over or new formation due to stasis. The stone may be found more frequently in post subtotal cholecystectomies or in cases where a gallbladder remnant have been left behind together with the cystic duct stump. This may occur in cases where the Calot's triangle is difficult to visualize or cholecystitis in the presence of portal hypertension. Completion cholecystectomy is the recommended treatment in cases where gallbladder remnant is found. ERCP may have a role in cystic duct remnant. Intraoperative cholangiography as a regular practice would certainly lower the rate of biliary PCS significantly. This case series provided an evidence based data related to postcholecystectomy syndrome that may help other surgical specialists to identify and plan treatment according to the type of pathology.

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Conflict of Interest:

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