International Surgery Journal
Om P et al. Int Surg J. 2023 Jun;10(6):1131-1133
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20231755

Case Report

Gall bladder stump cholelithiasis: a rare presentation

Prabha Om, Nidhi Gupta*, Amit Jain, Jagram Meena

Department of General Surgery, Sawai Man Singh Medical College, Rajasthan, India

Received: 19 April 2023
Revised: 16 May 2023
Accepted: 20 May 2023

***Correspondence:**
Dr. Nidhi Gupta,
E-mail: ngupta1411@gmail.com

ABSTRACT

Laparascopic cholecystectomy is a minimally invasive surgical procedure for the removal of a diseased gall bladder which has largely replaced open cholecystectomy since early 1990s. However some exhibit a certain 'post cholecystectomy syndrome' where there is a recurrence of symptoms similar to those before cholecystectomy. We reported a previously asymptomatic thirty eight year old woman with right hypochondrium pain and a history of laparascopic cholecystectomy seven years ago. Various causes for the same were evaluated and the patient was found to have gall bladder stump cholelithiasis on magnetic resonance cholangio pancreatography. A complete cholecystectomy was then performed and the patient achieved symptomatic resolution. It is important to be aware of this complication in post cholecystectomy patients who may present several years later.

Keywords: Post cholecystectomy syndrome, Stump cholelithiasis, Cystic duct remanant syndrome

INTRODUCTION

Gall bladder stump cholelithiasis is a rare entity with a mean incidence of 10-15% and seldom suspected in patients who present with symptoms of cholangitis with status post cholecystectomy.[5,11] It is a challenging diagnosis and often not apparent on basic radiological investigations. On an average patients can present post operatively from two days to twenty five years.[11] Increased awareness regarding this complication would serve to reduce it's incidence by taking appropriate preventive measures in the primary surgery as well as keep a provisional differential diagnosis in mind should such patients present to the emergency with acute abdominal pain.

CASE REPORT

A previously asymptomatic 38 year old woman presented with right hypochondrium pain of fifteen days duration, which was associated with nausea and vomiting. The pain was intermittent and colicky in nature and classically increased in the post prandial period, with occasional radiation to the back. No complaint of any fever, vomiting, anorexia or weight loss. On examination patient had tenderness and guarding in the right hypochondrium and no icterus. This patient had undergone open cholecystectomy seven years ago. With cholelithiasis and cholecystitis presumptively ruled out, we investigated our patient further for possible primary common bile duct choledocholithiasis, common bile duct stricture, hepatic abscess, peptic ulcer disease, hepatic flexure mass and pancreatitis.

All liver function tests and amylase- lipase levels were normal and no evidence of obstructive jaundice was present. An ultrasound of the abdomen was done which revealed an echogenic foci in the GB fossa and a normal CBD.

We did an MRCP for further investigation which reported a 4.9 mm sized hypointense filling defect in the GB stump-likely to be a calculus - and a CBD of 6mm with no filling defects. No records of the previous surgery could be obtained and it was decided to take the patient up for laparoscopic complete cholecystectomy.

After creating three ports, careful dissection of the under surface of liver was done and gall bladder fossa was visualized which revealed an enlarged gall bladder stump-establishing that the patient had originally undergone a subtotal cholecystectomy. Cystic duct and artery were clipped and the remaining part of gall bladder with calculus in situ was extracted. Patient was stable and relieved in post-operative period and has been asymptomatic in the next three months of follow up.

Figure 1: Filling defect seen in the biliary tree.

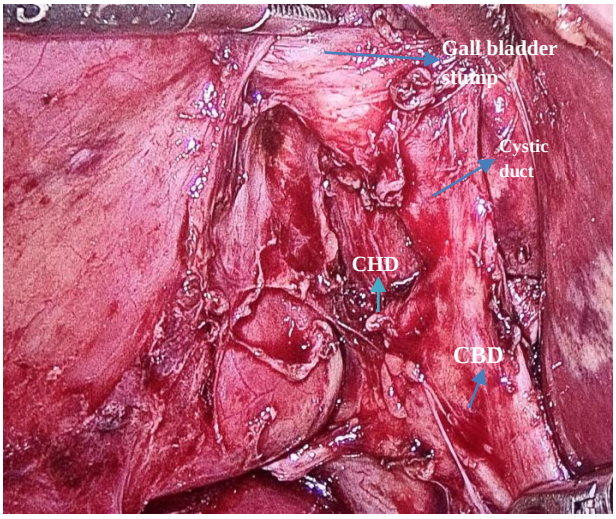

Figure 2: Intra-operative finding.

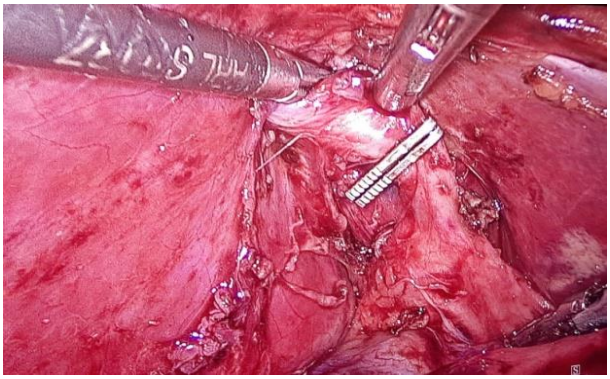

Figure 3: Clipping of residual cystic duct followed by division and removal of gall bladder stump.

Figure 4: Excised gall bladder stump.

DISCUSSION

Laparoscopic cholecystectomy provides clinical resolution in up to 85% of patients.[2] Remainder patients may have symptoms similar to the presurgical state, also known as the postcholecystectomy syndrome.[2] Causes for the same include conditions that arise from

Altered bile flow due to loss of reservoir function of the gall bladder, biliary strictures, Retained calculi, primary choledocholithiasis, tumours, sphincter of Oddi dysfunction and calculi in the cystic duct remnant or gall bladder stump.

Stump remnant stones are difficult to diagnose ultrasonography may occasionally suggest cystic duct stones by showing an acoustic shadow. ERCP and MRCP are investigations of choice but may fail to identify some cases.[4,9,10] In our case an ERCP was not warranted as MRCP gave conclusive findings.

Cystic duct remnant syndrome (CDRS) which is the presence of a residual cystic duct greater than 1cm in length is a rare biliary disorder, with a prevalence of less than 2.5% in post cholecystectomy period.[1,3] It can present in the immediate post-operative period or years later with a biliary colic presentation of pain, obstructive jaundice. Distention of the cystic duct remnant may occur due to-residual choledocholithiasis, bile duct stenosis, neuroma in scar tissue, biliary dyskinesia or sphincter of Oddi dysfunction. Dilatation of a residual gall bladder stump could be due to cholelithiasis or even mucocoele.[6]

Laparascopic cholecystectomies are more likely to be associated with such complications, owing to poor interpretation of anatomical variants - as compared to open cholecystectomy. ERCP retrieval is the first line of treatment for stump stones which are in a more proximal position.

If ERCP is not feasible, extracorporeal shock-wave lithotripsy (ESWL) with fragmentation of stones and

basketting could be done. The cystic duct remnant and the Calot triangle are surrounded by inflamed scar tissue, after incomplete cholecystectomy, which makes laparoscopic reoperation difficult.[1] However, with the advanced techniques, repeat complete laparascopic cholecystectomy is safe and hence was the chosen treatment approach in our patient as calculi was not accessible via ERCP.[7,10]

A high degree of suspicion is required to diagnose this rare entity as patients may present after several years of cholecystectomy and a myriad of other conditions may also have a similar presentation.[8] Radiological diagnosis may not always be astute, hence this condition should be a possible differential for surgeons - especially when all other conditions get ruled out. A complete cholecystectomy is a safe and effective resolution.[10]

CONCLUSION

A high degree of suspicion is required to diagnose this rare entity as patients may present after several years of cholecystectomy and a myriad of other conditions may also have a similar presentation. Radiological diagnosis may not always be astute, hence this condition should be a possible differential for surgeons - especially when all other conditions get ruled out. A complete cholecystectomy is a safe and effective resolution.

ACKNOWLEDGEMENTS

Authors would like to thanks Department of Radi-diagnosis for providing MRCP report and all the colleagues who were involved in the patient care.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Rozsos I, Magyaródi Z, Orbán P. Cystic duct syndrome and minimally invasive surgery. Orv Hetil. 1997;138(38):2397-401.
2. Zhou PH, Liu FL, Yao LQ, Qin XY. Endoscopic diagnosis and treatment of post-cholecystectomy syndrome. Hepatobiliary Pancreat Dis Int. 2003;2(1):117-20.
3. Rogy MA, Függer R, Herbst F, Schulz F. Reoperation after cholecystectomy. The role of the cystic duct stump. HPB Surg. 1991;4(2):129-34.
4. Hassan H, Vilmann P. Insufficient cholecystectomy diagnosed by endoscopic ultrasonography. Endoscopy. 2004;36(3):236-8.
5. Mergener K, Clavien PA, Branch MS, Baillie J. A stone in a grossly dilated cystic duct stump: a rare cause of postcholecystectomy pain. Am J Gastroenterol. 1999;94(1):229-31.
6. Whitby J, Thomson A, Gananadha S. Mucocele of the gall bladder stump: a cause of post-cholecystectomy syndrome. ANZ J Surg. 2016;86(9):725-6.
7. Chowbey PK, Bandyopadhyay SK, Sharma A, Khullar R, Soni V, Baijal M. Laparoscopic reintervention for residual gallstone disease. Surg Laparosc Endosc Percutan Tech. 2003;13(1):31-5.
8. Sahoo MR, Kumar A. Stump stone 6 years after cholecystectomy: a possibility. BMJ Case Rep. 2013;2013:bcr2012007957.
9. Kar A, Gulati S, Mohammed S, Valappil MV, Sarala BB, Ghatak S, et al. Surgical Management of Cystic Duct Stump Stone or Gall Bladder Remnant Stone. Indian J Surg. 2018;80(3):284-7.
10. Palanivelu C, Rangarajan M, Jategaonkar PA, Madankumar MV, Anand NV. Laparoscopic management of remnant cystic duct calculi: a retrospective study. Ann R Coll Surg Engl. 2009;91(1):25-9.
11. Shirah BH, Shirah HA, Zafar SH, Albeladi KB. Clinical patterns of postcholecystectomy syndrome. Ann Hepatobiliary Pancreat Surg. 2018;22(1):52-7.

Cite this article as: Om P, Gupta N, Jain A, Meena J. Gall bladder stump cholelithiasis: a rare presentation. Int Surg J 2023;10:1131-3.