



CODEN [USA]: IAJPBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4280056>Available online at: <http://www.iajps.com>

Research Article

**POST CHOLECYSTECTOMY AND ERCP
CHOLEDOCHOLITHIASIS: A RARE CASE****¹Hassan Mumtaz, ²Hajirah Khalid, ³Hassaan Ahmad Jasra, ⁴Gul e Saba Bukhari, ⁵Haji Ahmad Jasra, ⁶Tehreem Fatima**

¹House Surgeon, KRL Hospital, Islamabad, Pakistan., Former Internee Urology, Guys and St Thomas Hospital, London, GBR, General Medicine, Surrey Docks Center, London, GBR., hassanmumtaz.dr@gmail.com. ²Resident Surgeon, KRL Hospital Islamabad, akatsukihaya@yahoo.com, ³Resident Orthopaedic, PIMS Hospital Islamabad, hassaanaj@yahoo.com, ⁴House Surgeon, KRL Hospital Islamabad, saba.bukh@gmail.com, ⁵Consultant Anesthetist, drahmadjasra@gmail.com, ⁶CIBNP, California, USA, tehreem94@outlook.com

Article Received: September 2020 **Accepted:** October 2020 **Published:** November 2020**Abstract:**

ERCP can be used to remove stones in Common bile duct (Choledocolithiasis). In some cases, a stent is placed to facilitate bile flow and prevent impaction of stones. Here we present a patient with history of cholecystectomy and ERCP with stent placement 1 year back now presenting with sign and symptoms of obstructive jaundice. Ultrasonography showed stones in stent with no intrahepatic dilatation of biliary channels. Open laparotomy, CBD exploration, stent removal and choledocho duodenostomy was performed. Per-op findings were stones, sludge along with stent in the CBD.

Corresponding author:**Hassan Mumtaz,**

¹House Surgeon, KRL Hospital, Islamabad, Pakistan.,
Former Internee Urology, Guys and St Thomas Hospital, London,
GBR, General Medicine, Surrey Docks Center, London, GBR.,
hassanmumtaz.dr@gmail.com.

QR code



Please cite this article in press Hassan Mumtaz et al, *Post Cholecystectomy And Ercp Choledocholithiasis : A Rare Case*
., *Indo Am. J. P. Sci*, 2020; 07(11).

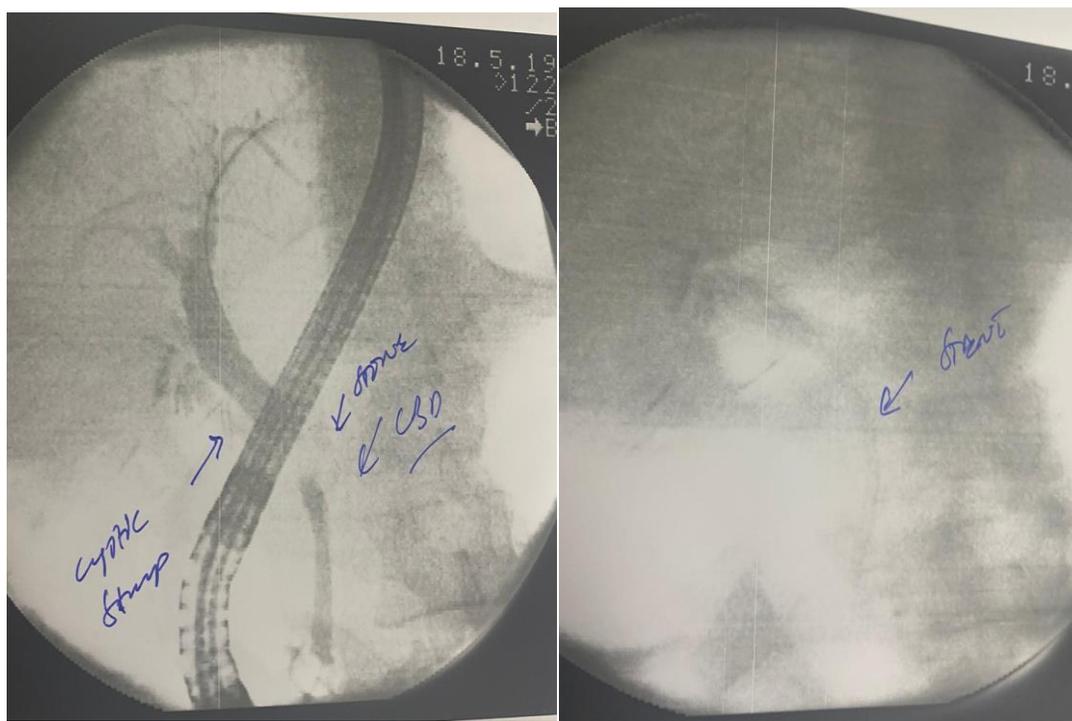
INTRODUCTION:

Common bile duct (CBD) stones can be treated with endoscopic retrograde cholangiopancreatography (ERCP) with or without stent insertion, followed usually by laparoscopic cholecystectomy for gallstones [1]. If common bile duct (CBD) stones (choledocholithiasis) are left untreated, they may cause increases in morbidity and mortality due to several conditions, including obstructive jaundice, repeated attacks of cholangitis, pancreatitis and secondary biliary cirrhosis [2]. Endoscopic retrograde cholangiopancreatography (ERCP) is used to effectively treat CBD stones. Although only 85–90% of CBDs have successful removal rates [3], the remaining 10–15% of CBDs cannot be extracted through ERCP because of the larger (≥ 15 mm) calculi, narrow angle ($\leq 135^\circ$) of distal CBD, the shortness (≤ 36 mm), anatomical difficulties and impacted calculi [4]. A transient stent is placed in the patient in

order to prevent impaction & provide a bridge for more advanced methods and to facilitate the bile drainage. It has been shown that such stenting makes the stones smaller and easier to remove [5]. However, it has not been clarified that this method is effective in all types of stones, nor whether the success of the treatment will be affected by the size and number of stones, and how long the transient biliary stent will stay in situ [6].

Case Presentation:

A 45 years old male presented to the emergency department with complaints of jaundice and itching since 1 month. He reported having a laproscopic cholecystectomy one year back, followed by jaundice and pancreatitis. ERCP was also done which showed cystic stump stones + CBD stones. CBD was cleared and the stenting was done due to which jaundice and pancreatitis settled down.



(Fig 1 on the left. Shows cystic stump and stone in the CBD where as Fig 2 on the right shows stent being placed)

He now presented again with jaundice and generalized vomiting on and off that aggravated 1 month back. An ultrasound was done showing stones in stent & no intrahepatic dilatation of biliary channels. On examination he was mildly jaundiced, his abdomen was soft, non tender and having positive bowel sounds. He was a diagnosed case of diabetes mellitus type 2 which was controlled by medication. Routine Investigations were done which revealed.

He was planned for open laparotomy, CBD exploration, stent removal and choledocho duodenostomy. Per op findings were stones, sludge along with stent in the CBD. A midline incision was given to open the subcutaneous tissue along with anterior and posterior rectus sheath. Peritoneum was breached so CBD can be opened and explored. Stones, sludge, bile and stent was removed from CBD.

Anastomosis was created between CBD and duodenum. A drain was placed and abdomen was closed in reverse order by applying skin staples.

WBC Count	9.5 x 10 ⁹ /l
Haemoglobin	13.1 g/dl
Platelets	279 x 10 ⁹ /l
Neutrophils	84%
Lymphocytes	10%
Na+	130 mmol/l
K+	3.9 mmol/l
Cl-	98 mmol/l
Bilirubin	1.84 mg/dl
ALT	316 U/l
ALP	765 U/l

He was given iv antibiotics along with iv pain killers and drain output charting was done. Patient was vitally stable and discharged for home after 2 days.

DISCUSSION:

To the best of our knowledge, this is the first case reported of gall bladder stones obstruction post ERCP stenting.

A study done in Egypt 2018, shows that biliary stent insertion after choledocholithiasis clearance has the disadvantage of prolonging ERCP time, increasing its cost and the stent-related complications with no advantage in comparison to without stent insertion [7]. The placement of a stent in the CBD after ERCP before performance of a cholecystectomy is based on lowering the pressure in the bile ducts and providing better bile drainage in addition to preventing stone migration from the gallbladder to the CBD [8]. Where as a study concluded that out of 603 patients, 15.5% patients had repeat stones at the time of stent removal which is significant. Thus, it is logical and imperative to place a stent to prevent postoperative complications of leaks and cholangitis with jaundice [9].

Many authors report that most recurrences of bile duct stones take place in the first 3 years[10-11], the limit between recurrence and residual stone disease is somewhat arbitrary with many authors advocating for the threshold of 5[11] to 6[10] mo.

Endoscopic transpapillary gallbladder stenting (ETGBS) is considered an effective treatment option for acute cholecystitis in poor surgical candidates with severe comorbidities. However, there is very few published data on long-term outcomes in terms of symptomatic cholelithiasis in such patients. Because advanced skills are required and there is a risk of

procedure-related severe pancreatitis because of the transpapillary approach, conventional measures such as conservative therapy or PTGBA/D are generally selected as the initial approach for managing acute cholecystitis [12].

A study shows that endoscopic stenting of the gallbladder is simple, effective, and safe in this population and may provide an excellent alternative for patients [13]. Despite little evidence on the management of perforations, T-tube placement seems a rational option for allowing perforations to heal and for further assessment of on-going leaks through cholangiography [1]. A 2020 study confirmed that choledochotomy, multiple ERCP, the number of stones, stent placement and angle of common bile duct < 120° were independent risk factors for recurrence of CBDS after ERCP [14].

CONCLUSION:

Extreme latency in presentation importantly highlights the possibilities of post-cholecystectomy bile duct stones and the need to acknowledge the potential for such late presentations even in patients who have undergone cholecystectomies, thus reducing the propensity for secondary stones within the bile ducts. The laparoscopic choledochoduodenostomy is proven effective and could be considered as feasible technique for treatment of patients with impact distal CBD stone which cannot be removed by ERCP or intraoperative maneuver.

REFERENCES:

1. Nehemiah Samuel, Alex Wheeler, Muhammad H Shiwani. Common Bile Duct Perforation By Biliary Stents Post ERCP. Sage 2016. <https://www.sages.org/meetings/annual->

- meeting/abstracts-archive/common-bile-duct-perforation-by-biliary-stents-post-ercp-case-reports-and-literature-review-of-management/
- Lambou-Gianoukos S, Heller SJ. Lithogenesis and bile metabolism. *Surg Clin North Am.* 2008;88:1175–94
 - Joyce AM, Heiss FW. Endoscopic evaluation and therapies of biliary disorders. *Surg Clin North Am.* 2008;88:1221–40
 - Kim HJ, Choi HS, Park JH, et al. Factors influencing the technical difficulty of endoscopic clearance of bile duct stones. *Gastrointest Endosc.* 2007;66:1154–60.
 - Hochberger J, Tex S, Maiss J, et al. Management of difficult common bile duct stones. *Gastrointest Endosc Clin N Am.* 2003;13:623–34
 - Aslan F, Arabul M, Celik M, Et all. The effect of biliary stenting on difficult common bile duct stones. *Prz Gastroenterol.* 2014;9(2):109-115. doi:10.5114/pg.2014.42507
 - Sultan HM, Rageh TM, Alsoaood AM. Necessity of stent placement after successful common bile duct stone clearance by endoscopic retrograde cholangiopancreatography. *Menoufia Med J* 2019;32:1229-33
 - Donelli G, Guaglianone E, di Rosa R, Fiocca F, Basoli A. Plastic biliary stent occlusion: factors involved and possible preventive approaches. *Clin Med Res* 2007; 5:53–60.
 - Desai PN, Kabrawala MV. Su1633 a single centre study of 603 cases of pre cholecystectomy CBD stones-to assess the necessity of stent placement after ERCP. *Gastrointest Endosc* 2014; 79:AB347
 - Tanaka M, Takahata S, Konomi H, Matsunaga H, Yokohata K, Takeda T, Utsunomiya N, Ikeda S. Long-term consequence of endoscopic sphincterotomy for bile duct stones. *Gastrointest Endosc.* 1998;48:465–469.
 - Lai KH, Lo GH, Lin CK, Hsu PI, Chan HH, Cheng JS, Wang EM. Do patients with recurrent choledocholithiasis after endoscopic sphincterotomy benefit from regular follow-up? *Gastrointest Endosc.* 2002;55:523–526.
 - Hideki Kamada, Hideki Kobara, Naohito Uchida, Et all. Long-Term Management of Recurrent Cholecystitis after Initial Conservative Treatment: Endoscopic Transpapillary Gallbladder Stenting", *Canadian Journal of Gastroenterology and Hepatology*, vol. 2018, ArticleID 3983707, 7 pages, 2018. <https://doi.org/10.1155/2018/3983707>
 - Roshan Shrestha, Thomas E. Trouillot, Gregory T. Everson. Endoscopic Stenting of the Gallbladder for Symptomatic Gallbladder Disease in Patients With End-Stage Liver Disease Awaiting Orthotopic Liver Transplantation. <https://aasldpubs.onlinelibrary.wiley.com/doi/pdf/direct/10.1002/lt.500050402>
 - Lujian, Peng MD; Xianneng, Cheng MD; Lei, Zhang MD* Risk factors of stone recurrence after endoscopic retrograde cholangiopancreatography for common bile duct stones, *Medicine: July 02, 2020 - Volume 99 - Issue 27 - p e20412* doi: 10.1097/MD.00000000000020412.