

# Recurrent Acute Gallstone Pancreatitis 10 Years after Cholecystectomy, a Rare Case Report

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**Abstract** Alcohol intake and Gallstones account for more than two third cases of acute pancreatitis with gallstones solely responsible for 30 to 40 % of cases. We herein, present a rare case of acute pancreatitis in a 94 years old nonalcoholic male with past surgical history of cholecystectomy performed 10 years ago. Patient presented with acute epigastric pain, lipase of 1083 U/L, amylase of 1634 U/L, obstructive LFTs pattern and normal pancreas on CT abdomen. CA 19-9 was checked due to the patient's recent weight loss and was found elevated at 420 U/ML. Patient's symptoms resolved with conservative management in 2 days and lipase normalized. Considering his elevated CA 19-9 and recent weight loss, he was referred for endoscopic ultrasound as an outpatient for further workup. He presented again within 2 days of discharge with similar symptoms and lipase of 1100 U/L. Gastroenterology was consulted and ERCP performed which showed intrahepatic and extrahepatic bile duct dilatation with a filling defect in the distal common bile duct. Multiple stones measuring 2-4 mm were removed along with some biliary sludge and the symptoms resolved right away. The lipase level normalized and CA 19-9 dropped down dramatically to 42 U/ML. Although the incidence of recurrent choledocholithiasis after cholecystectomy is 2 to 10 %, the diagnosis of acute pancreatitis secondary to recurrent choledocholithiasis with elevated CA 19-9 can easily be missed in post cholecystectomy patients. Our patient's presentation is unique that he developed acute gallstone pancreatitis secondary to CBD stones 10 years after cholecystectomy.

**Keywords:** pancreatitis, cholecystectomy, gall stone, amylase, lipase

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## 1. Introduction

Acute pancreatitis is an inflammatory condition of the pancreas leading to abdominal pain and elevated levels of pancreatic enzymes in the blood. The reported annual incidence of acute pancreatitis ranges from 4.9 to 35 per 100,000 population [1,2]. Alcohol intake and gallstones are the two most common causes of acute pancreatitis [3,4]. Elective cholecystectomy is recommended for gallstones as a cause of acute pancreatitis and has proven benefit in lowering the risk of recurrence. Recurrent common bile duct (CBD) stones are defined as stones demonstrated 6 months after either endoscopic retrograde cholangiopancreatography (ERCP) or cholecystectomy [4,5,6]. Recurrence of CBD stones after ERCP is well studied in various studies and several risk factors have been identified but very limited data is available on CBD stone recurrence after cholecystectomy. [5,7,8,9].

## 2. Case Study

A 94 years old male with past medical history significant for cholecystectomy 10 years back presented with abdominal pain. His initially laboratory workup revealed lipase of 1100 U/L, amylase of 1300 U/L and obstructive pattern of liver enzymes. He was diagnosed with acute pancreatitis and was managed conservatively. CA 19-9 was also checked given his recent weight loss and was found elevated at 420 U/ML. Considering his elevated CA 19-9 levels, weight loss and removed gall bladder, pancreatic neoplasm was highly suspected. Patient's symptoms were resolved and he was referred for endoscopic ultrasound for further workup of pancreatic neoplasm. Two days after his discharge he again presented with similar symptoms and elevated lipase at 1200 U/L. Ultrasound abdomen showed some questionable dilatation of common bile duct. Gastroenterology was consulted and ERCP was performed which revealed intrahepatic and

extrahepatic bile duct dilatation with multiple stones measuring 2 to 4 mm in the distal common bile duct [Figure 1 and Figure 2]. The CBD stones were removed

along with some biliary sludge and the patient's symptoms were resolved. This is a rare case of gallstones causing acute pancreatitis 10 years after cholecystectomy.

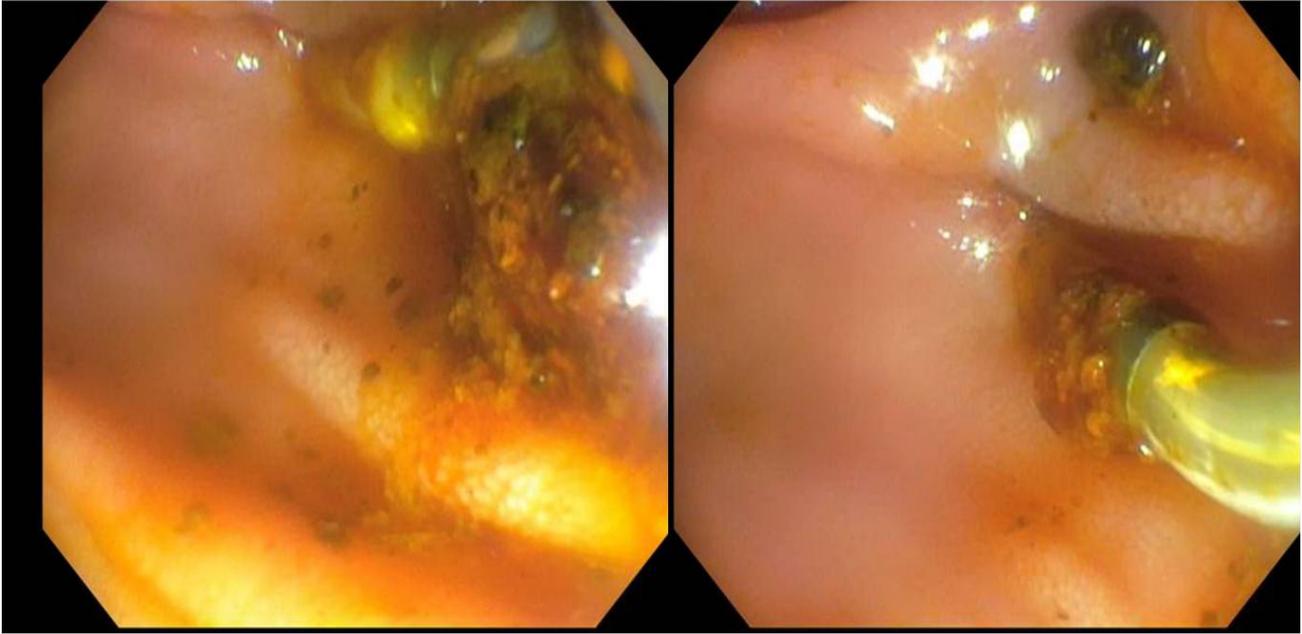


Figure 1. ERCP with sphincterotomy; Removal of CBD stones and biliary sludge

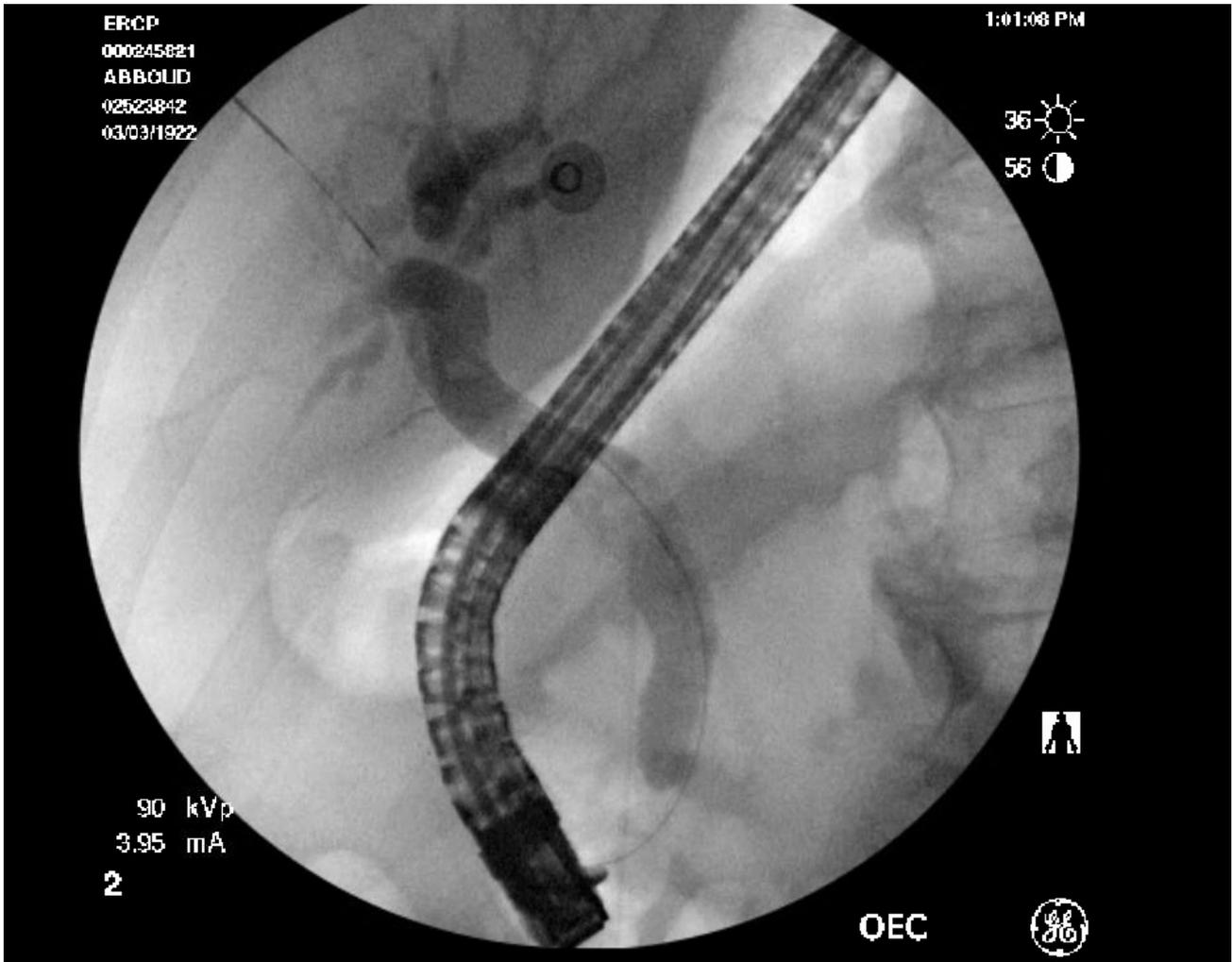


Figure 2. ERCP showing intra and extrahepatic bile duct dilatation with filling defects

### 3. Discussion

The reported annual incidence of acute pancreatitis ranges from 4.9 to 35 per 100,000 population [1,2]. Gallstones are responsible for almost 35 to 40 % of cases of acute pancreatitis [3]. Recurrent gallstone pancreatitis, defined as acute pancreatitis in the setting of CBD stones six months after cholecystectomy and usually occur in the first 24 months with incidence being rare afterwards [4,5]. Our patient developed CBD stones 10 years after his cholecystectomy. The annual incidence of recurrent CBD stones as per one study was found to be 10.4 % [5]. Type 1 and 2 peri-ampullary diverticulum, biliary stricture, angulation of the CBD and multiple CBD stones are some of the identified risk factors [5,7,8,9].

Most patients with acute pancreatitis have acute onset of severe epigastric abdominal pain. In some patients, the pain may be in the right upper quadrant. Majority of patients with gallstone pancreatitis have associated nausea and vomiting which may persist for several hours. Lipase is the most sensitive and specific enzyme in acute pancreatitis [10]. Routine abdominal computed tomography (CT) scan is not recommended at initial presentation in patients with acute pancreatitis unless there is uncertainty about the diagnosis. CA 19-9 level as in our patient is usually elevated in most of the cases of acute pancreatitis making it a poor screening tool for pancreatic carcinoma [11].

Treatment is mostly supportive including pain control, intravenous fluids administration especially during the first 24 hours, and correction of electrolyte and metabolic abnormalities. Antibiotics are rarely necessary unless necrosis of pancreas or systemic signs of infection are present and should be discontinued once cultures are unremarkable. Like in our patient, ERCP should be attempted within 24 hours in patients with CBD stones as a likely cause of pancreatitis.

Systemic inflammatory response syndrome (SIRS) score, the Acute Physiology and Chronic Health Examination (APACHE) II score, the bedside index of severity in acute pancreatitis score, and the computed tomography (CT) severity index are some of the proposed scoring systems to predict the severity and prognosis of acute pancreatitis. Modified Marshall scoring system is a helpful tool to assess the organ dysfunction [12]. The overall mortality of acute pancreatitis is approximately 5 % and can be as high as 30 % in select number of patients with severe disease [13].

### 4. Conclusion

Gallstones are one of the most significant cause of acute pancreatitis. Recurrent stones in CBD can occur any time after 6 months of ERCP or cholecystectomy and

usually occur within the 1<sup>st</sup> 24 months and being rare afterwards. CA 19-9 is usually elevated in acute pancreatitis undermining its role as a screening tool for pancreatic carcinoma and can often be misleading. Early diagnosis, prompt intravenous fluid administration, pain control, correction of electrolyte imbalances can significantly lower the mortality. ERCP should always be considered in the 1<sup>st</sup> 24 hours in patients having gallstones as a likely cause of pancreatitis.

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