Symptomatic calculi in a remnant gallbladder: a rare cause of post-cholecystectomy syndrome and biliary pancreatitis

Fig. 1 Computed tomography (CT) scan of the abdomen and pelvis showing the remnant gallbladder containing small calculi in: **a** coronal view; **b** axial view.

Fig. 2 The remnant gallbladder and the presence of small calculi within it were confirmed on: **a** magnetic resonance imaging (MRI); **b** magnetic resonance cholangiopancreatography (MRCP).

Biliary pain after cholecystectomy, known as post-cholecystectomy syndrome, is common and has a broad differential diagnosis. Here we present a case of biliary pancreatitis and intermittent biliary pain that was caused by a remnant gallbladder that contained calculi.

A 45-year-old man presented for evaluation of abdominal pain. He had undergone cholecystectomy 2 years previously and described intermittent right upper quadrant pain and bloating associated with fatty meals, which had begun a few months after the cholecystectomy. He had been hospitalized 3 months before presentation to us with biliary pancreatitis. His physical examination was notable for

mild right upper quadrant tenderness only. Laboratory results showed normal transaminases and bilirubin, but his alkaline phosphatase was minimally elevated. A computed tomography (CT) scan showed a small pouch with tiny calculi connected to the biliary tree (Fig. 1). This finding was confirmed by magnetic resonance cholangiopancreatography (MRCP) (Fig. 2).

Endoscopic retrograde cholangiopancreatography (ERCP) was therefore performed. The cholangiogram showed a normal main bile duct, but calculi within a cystic structure that was connected to the biliary tree through the cystic duct, compatible with a gallbladder remnant

(Fig. 3). A plastic stent was placed in the common bile duct (CBD) to facilitate intraoperative identification. The patient underwent resection of the gallbladder remnant 1 month later, following which he had no further symptoms.

Calculi in the gallbladder or cystic duct remnant account for less than 2.5% of cases of post-cholecystectomy syndrome but must be considered in any patient with recurrent biliary pain after cholecystectomy [1]. Typically, symptoms arise if the cystic duct remnant contains stones and is longer than 1 cm [2]. The cystic duct remnant dilates, giving the impression of a small gallbladder on imaging studies. Presentation can occur within weeks to months, but may be as long as decades after cholecystectomy. The condition can arise in those who have undergone either open or, more commonly, laparoscopic cholecystectomy [3,4].

Treatments include ERCP with sphincterotomy and possible stent placement to aid CBD drainage, with the definitive treatment being “re-cholecystectomy” [2], as in our patient. Successful extracorporeal shock-wave lithotripsy (ESWL) has also been reported [5]. While symptomatic calculi in a remnant gallbladder are rare, gastroenterologists should be aware of this diagnosis as endoscopic therapy may be indicated and surgical referral is usually warranted.

Endoscopy_UCTN_Code_CCL_1AZ_2AD

Competing interests: None

Stephanie Judd^{1,2}, Lawrence Miller¹, Fadi Antaki¹

¹ Division of Gastroenterology, Department of Internal Medicine, John D. Dingell VA Medical Center and Wayne State University School of Medicine, Detroit, Michigan, USA

² Detroit Medical Center, Detroit, Michigan, USA

Acknowledgment

This material is the result of work supported with resources and the use of facilities at the John D. Dingell VAMC, Detroit, Michigan. The content does not represent the views of the Department of Veteran Affairs or the United States Government.

Fig. 3 View during endoscopic retrograde cholangiopancreatography (ERCP) showing the normal common bile duct and remnant gallbladder.

References

- 1 Rogy MA, Függer R, Herbst F et al. Reoperation after Cholecystectomy. The role of the cystic duct stump. *HPB Surg* 1991; 4: 129–135
- 2 Shaw C, O'Hanlon DM, Fenlon HM et al. Cystic duct remnant and the post-cholecystectomy syndrome. *Hepatogastroenterology* 2004; 51: 36–38
- 3 Walsh RM, Ponsky JL, Dumot J. Retained gall bladder/cystic duct remnant calculi as a cause of post cholecystectomy pain. *Surg Endosc* 2002; 16: 981–984
- 4 Palaniyevlu C, Rangarajan M, Jategaonkar PA et al. Laparoscopic management of remnant cystic duct calculi. A retrospective study. *Ann R Coll Surg Engl* 2009; 91: 25–29
- 5 Benninger J, Rabenstein T, Farnbacher M et al. Extracorporeal shockwave lithotripsy of gallstones in cystic duct remnants and Mirizzi syndrome. *Gastrointest Endosc* 2004; 60: 454–459

Bibliography

DOI <http://dx.doi.org/10.1055/s-0033-1359193>
Endoscopy 2014; 46: E67–E68
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

Stephanie Judd, MD
 Division of Gastroenterology
 Department of Internal Medicine
 John D. Dingell VA Medical Center and
 Wayne State University
 4646 John R Road
 C-3820, Detroit
 MI 48201
 USA
 Fax: +1-313-576-1237
sjudd@med.wayne.edu