

A large impacted pancreatic duct stone causing acute cholangitis



Fig. 1 Endoscopic views showing: **a** whitish material impacted at the ampullary orifice; **b** a white stone impacted at the lower part of the ampulla, which was revealed following free-hand precut sphincterotomy.

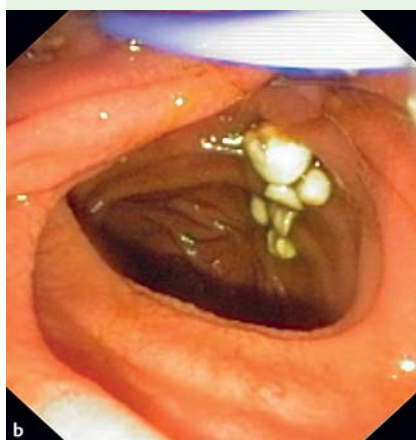


Fig. 3 Endoscopic views showing: **a** the oval-shaped white stone that was initially pushed out by the contrast injection; **b** multiple residual pancreatic duct stones that were removed using an extraction balloon.



Fig. 2 Contrast injection beyond the impacted stone revealed multiple filling defects in the pancreatic duct with no evidence of a stricture.

A 67-year-old woman with diabetes presented with persistent pain in the right upper quadrant radiating through to her back. Later, she developed a high fever and jaundice. On examination, her epigastrium was soft with mild tenderness but no signs of peritonitis. Abdominal ultrasonography showed a 1.3-cm round hyperechoic lesion with an acoustic shadow at the distal end of the common bile duct, which was dilated, but no evidence of stones in the gallbladder. Endoscopic retrograde cholangiopancreatography (ERCP) was carried out and duodenoscopy revealed a bulging ampulla with whitish material at the opening (● Fig. 1 a). The initial impression was of an impacted biliary stone causing cholangitis.

A free-hand precut sphincterotomy was performed over the stone with a needle-knife and yielded a gush of dark bile from the roof of the ampulla. At the lower end, a large whitish stone was exposed but was still completely blocking the pancreatic orifice (● Fig. 1 b; ● Video 1). A sphincterotome was inserted below the stone then a contrast injection was given. This demonstrated multiple filling defects within the dilated pancreatic duct but without any evidence of strictures (● Fig. 2). Surprisingly, the pressure from the contrast injection pushed out a 2-cm oval stone from the pancreatic orifice (● Fig. 3 a). The remaining stones were then successfully removed with an extraction balloon (● Fig. 3 b). Balloon extraction was then performed without any resistance in the bile duct and yielded no biliary stones. A subsequent cholangiopancreatogram showed upstream dilatation of the pancreatic and common bile ducts without any filling defects (● Fig. 4).

An impacted pancreatic duct stone is a rare cause of obstructive jaundice in patients with chronic pancreatitis. To date, fewer than 10 cases have been reported [1–5]. Tropical pancreatitis is the main etiology [2,3]. Congenital or acquired malunion of the pancreatobiliary channel may be one of the possible causative mechanisms in these patients [2,5]. A clue to a possible impacted pancreatic

Video 1

Endoscopic view of the bulging ampulla and whitish impacted material, of the precut sphincterotomy being performed and the large white stone being pushed out by the contrast injection.



Fig. 4 The final cholangiopancreatogram showing dilatation of both the pancreatic and common bile ducts with no residual filling defects.

duct stone is a whitish stone that is impacted at the lower part of a bulging ampulla.

Endoscopy_UCTN_Code_CCL_1AZ_2AZ

Competing interests: None

**Piyapan Prueksapanich¹,
Phonthep Angsuwatcharakon^{1,2},
Rungsun Rerknimitr¹,
Pinit Kullavanijaya¹**

¹ Division of Gastroenterology, Chulalongkorn University, Bangkok, Thailand

² Department of Anatomy, Chulalongkorn University, Bangkok, Thailand

References

- 1 Hernandez JA, Zuckerman MJ, Moldes O. Pancreatic stone presenting with biliary obstruction. *Gastrointest Endosc* 1994; 40: 521–523
- 2 Kinoshita H, Imayama H, Sou H et al. A case of obstructive icterus caused by incarceration of a pancreatic stone in the common channel of the pancreatobiliary ducts. *Kurume Med J* 1996; 43: 79–85
- 3 Naitoh I, Nakazawa T, Ohara H et al. A case of obstructive jaundice caused by impaction of a pancreatic stone in the papilla for which a needle knife precut papillotomy was effective. *JOP* 2008; 9: 520–525
- 4 Yoo KH, Kwon CI, Yoon SW et al. An impacted pancreatic stone in the papilla induced acute obstructive cholangitis in a patient with chronic pancreatitis. *Clin Endosc* 2012; 45: 99–102
- 5 Little TE, Kozarek RA. Pancreatic stones as a cause of bile duct and ampullary obstruction: endoscopic treatment approaches. *Gastrointest Endosc* 1993; 39: 709–712

Bibliography

DOI <http://dx.doi.org/10.1055/s-0033-1344830>
Endoscopy 2013; 45: E352–E353
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

Rungsun Rerknimitr, MD
 Division of Gastroenterology
 Department of Internal Medicine
 Faculty of Medicine
 Chulalongkorn University
 Bangkok 10310
 Thailand
 Fax: +66-2-2527839
 ERCP@live.com