

A large impacted pancreatic duct stone causing acute cholangitis

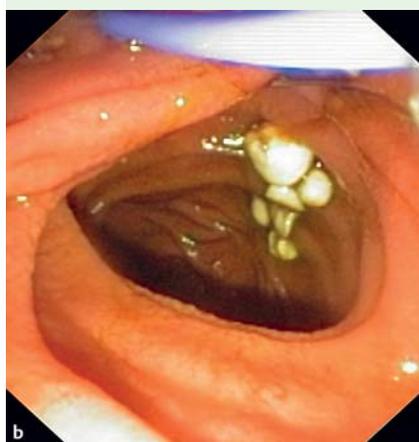


Fig. 1 Endoscopic views showing: **a** whitish material impacted at the ampullary orifice; **b** a white stone impacted at the lower part of the ampulla, which was revealed following free-hand precut sphincterotomy.

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.

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Competing interests: None

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