Mini-invasive treatment of sump syndrome: OverStitch choledochoduodenostomy revision

A 72-year-old woman, who was unfit for surgery, was admitted with recurrent cholangitis. She had a history of cholecystectomy and side-to-side choledochoduodenostomy (CDD) for huge impacted stones. In the previous year, she had undergone multiple endoscopic retrograde cholangiopancreatographies (ERCPs) with endoscopic sphincterotomy, incomplete stone extractions, and plastic stent placement in a local hospital. Magnetic resonance cholangiography showed multiple stones throughout the biliary tree, which was dilated up to 4 cm, along with an incarcerated plastic stent.

Endoscopy with a frontal-view scope (GIF-1TH190; Olympus Europe) confirmed a 25-mm CDD in the duodenal bulb (▶ Fig. 1). Management of the huge impacted stones by conventional techniques was not feasible; therefore, a 1.9-Fr bipolar electrohydraulic lithotripsy probe (Autolith; Northgate Technologies Inc.) was passed through the working channel of the endoscope to break the stones under direct cholangioscopy guidance (▶ Fig. 2). The scope channel allowed the removal of all fragments. Final fluoroscopy revealed a large diameter, atonic, empty biliary tree with delayed biliary outflow. A plastic stent was then inserted from the common bile duct to the duodenum, through the papilla, to promote drainage (▶ Fig. 3).

The patient returned 1 month later because of cholangitis. Endoscopy revealed a large amount of food debris in the biliary reservoir; a diagnosis of sump syndrome was made. Complete extraction of the food matter was performed. In order to prevent the recurrence of duodenocholedochal reflux, we decided to perform a stoma revision using the OverStitch device (Apollo Endosurgery; Austin, Texas, USA) to reduce the size of the CDD, leaving enough room for biliary outflow (▶ Video 1). There were no post-procedural complications. The patient has remained asymptomatic during 1 year of follow-up (▶ Fig. 4).

Sump syndrome is a rare long-term complication of CDD, with a reported prevalence of 2.5% [1]. Endoscopic sphincterotomy is the treatment of choice but, if endoscopic treatment fails, surgery is advisable [2]. Evidence concerning endoscopic closure of a CDD is lacking [3–5]. This is the first report detailing an endoscopic revision of a CDD using endoscopic suturing.
Competing interests

None

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References


DOI https://doi.org/10.1055/a-0919-4318
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

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Fig. 4 Follow-up endoscopic evaluation at 2 months showing a reduced caliber of the choledochoduodenostomy, with no evidence of lithiasis or food/debris inside.

Video 1 Management of sump syndrome by electrohydraulic lithotripsy under direct cholangioscopy view and by choledochoduodenostomy revision using an endosuturing system.