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Duplication cyst obscuring major duodenal papilla

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A 45-year-old female presented with abdominal pain and jaundice of 3 days' duration. Her liver function tests revealed serum bilirubin of 8.6 mg/dL (conjugated: 4.6 g/dL). Ultrasound revealed cholelithiasis and choledocholithiasis. During endoscopic retrograde cholangiopancreatography (ERCP), a large submucosal lesion was seen in the second part of the duodenum (Fig. 1A). It was compressible with an ERCP cannula (Fig. 1A) and the papillary orifice could not be located. Endoscopic ultrasound demonstrated a multi-layered cystic structure, with cyst *muscularis propria* communicating with duodenal *muscularis propria* (Fig. 1B; arrows), suggestive of a duodenal duplication cyst. The common bile duct was seen to enter this cystic lesion. Endoscopic incision and marsupialization of the cyst was performed. Contrast injection after incision demonstrated the duplication cyst as a contrast-filled cavity (Fig. 2A). Following marsupialization, the papillary opening was identified and the common bile duct (CBD) selectively cannulated. The cholangiogram revealed a large stone obstructing the CBD. A 7-Fr stent was placed in the bile duct (Fig. 2B) and this led to the resolution of jaundice. Histological examination of biopsies from inside and outside the cyst revealed duodenal mucosa. Because of the presence of the large CBD stone the patient was referred to the surgical department for cholecystectomy and CBD exploration.

Duplication cysts are rare congenital anomalies that can occur anywhere along the gastrointestinal tract, with the duodenum being a rare site [1,2]. Periampullary duplication cysts are very rare and closely mimic a choledochocele. The position of the papilla helps differentiate between the two, with the papilla being on the proximal side of the bulge in the case of a duplication cyst and distal to the bulge in a choledochocele [1,2]. In addition, the duplication cyst is lined with duodenal mucosa containing a distinct muscle layer, whereas a choledochocele is lined by either a bile duct or a gallbladder mucosa and lacks a muscle layer [1,2].

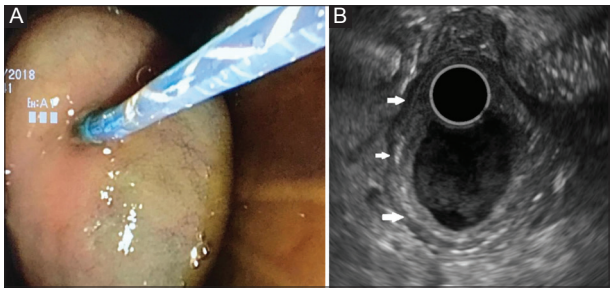

Figure 1 (A) Large submucosal lesion seen in the second part of the duodenum that is compressible with the endoscopic retrograde cholangiopancreatography cannula. (B) Endoscopic ultrasound: multi-layered cystic structure with cyst *muscularis propria* communicating with duodenal *muscularis propria*

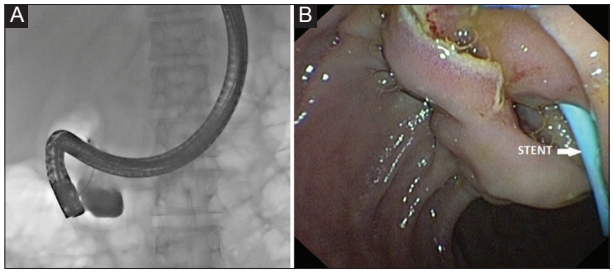

Figure 2 (A) Endoscopic retrograde cholangiography: contrast injection after incision shows the duplication cyst as a contrast filled cavity. (B) A 7-Fr stent was placed in the bile duct after endoscopic incision and marsupialization of the duplication cyst

The traditional treatment of a duplication cyst is surgery. However, successful endoscopic therapy for intraluminal duplication cysts, such as snare resection or endoscopic incision and marsupialization of the cyst, have also been reported [1-3].

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Conflict of Interest: None

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