A rare cause of biliary colic

Fig. 1 Abdominal ultrasound image in a 29-year-old woman undergoing evaluation for recurrent biliary colic shows mild dilatation of the common bile duct with a web at its distal end (arrows), misdiagnosed as a small stone. CBD, common bile duct.

A 29-year-old woman presented to our center for the evaluation of recurrent biliary colic. Abdominal ultrasound revealed mild dilatation of the common bile duct (CBD) apparently with a small stone at its distal end (● Fig. 1). The patient underwent endoscopic retrograde cholangiopancreatography (ERCP), which showed mild dilatation of the CBD but no stones. A horizontal filling defect was observed at the distal end of the CBD (● Fig. 2). Lateral fluoroscopic examination showed a small biliary web (● Fig. 3). During a sweep of the CBD with the extraction balloon, mild resistance was encountered at the site of the web, which was then dilated with the balloon (● Fig. 4). Biliary webs are rare, with approximately 20 cases reported in the literature [1]. Most biliary webs are associated with choledocholithiasis as a result of impaired biliary drainage [2]. Although the exact

mechanism behind the formation of webs in the bile ducts is not known, some are believed to be congenital [3]. During the development of the human embryo, the bile ducts pass through a solid stage, in which the lumen becomes obliterated by epithelial proliferation [4]. Recanalization of the biliary tree usually starts at the end of the fifth week of gestation [4]. Incomplete recanalization can lead to the development of a web.

Biliary webs are typically diagnosed by contrast cholangiography or magnetic resonance imaging. Also, direct in vivo cholangioscopic imaging of a biliary web has been reported [5]. During more than 6 months of follow-up evaluation after balloon dilation of the web, our patient has not experienced any biliary problems.

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Fig. 2 Fluoroscopic image shows a horizontal filling defect at the distal end of the common bile duct.

Fig. 3 Lateral fluoroscopic image shows a small biliary web.

Fig. 4 Balloon dilation of the web.

Competing interests: None

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