Endoscopic ultrasound appearance of dead *Ascaris lumbricoides* in the biliary tract

A 2-year-old Indian girl was referred with symptoms of biliary colic and obstructive jaundice of 3 weeks’ duration. Abdominal ultrasonography revealed dilation of intrahepatic biliary radicles, a distended gallbladder, and a dilated common bile duct (CBD) of 15 mm (normal diameter up to 6 mm) containing multiple ill-defined, oval, hyperechoic shadows near the lower end (▶Fig. 1). Magnetic resonance cholangiopancreatography (MRCP) showed multiple intraluminal curvilinear, hypointense areas in the lower CBD consistent with stones or worm (▶Fig. 2). Linear endoscopic ultrasound (EUS) was performed for evaluation of the CBD filling defects visualized on abdominal ultrasound and MRCP. Linear EUS from the stomach and duodenal bulb revealed a dilated CBD with multiple hyperechoic structures without acoustic shadowing. EUS showed curvilinear, disc-shaped short-segment echogenic structures, 2–6 mm in size, with a central anechoic core and parallel and equidistant from each other; this was suggestive of recently broken down soft parallel fragments of roundworms (▶Fig. 3, ▶Video 1). The central anechoic core represented the digestive tract of *Ascaris lumbricoides*. Cholangiography revealed a dilated CBD with tapering at the lower end showing multiple filling defects (▶Fig. 4). After multiple balloon sweeps on endoscopic retrograde cholangiopancreatography (ERCP), creamy white structures and yellow-colored material were removed that were suggestive of recently fragmented roundworm (▶Fig. 5, ▶Video 1). The patient’s clinical condition improved significantly after ERCP, and repeat abdominal ultrasound after 1 week demonstrated decreased size of the CBD. The patient underwent deworming with albendazole, with the passage of multiple roundworms in stools further confirming the diagnosis of obstructive jaundice due to *Ascaris*.

Pancreaticobiliary ascariasis is a common problem in tropical countries [1]. Dead *Ascaris* is a rare but an important cause of obstructive jaundice in the developing world [2]. In conclusion, we describe an unusual appearance of recently dead *Ascaris lumbricoides* on abdominal ultrasound, MRCP, and EUS. In endemic regions, biliary ascariasis should be considered in any child presenting with obstructive jaundice [3].
Competing interests
All authors have no conflict of interest to disclose.

The Authors
Piyush Somani, Malay Sharma, Saurabh Jindal
Department of Gastroenterology, Jaswant Rai Speciality Hospital, Saket, Meerut, Uttar Pradesh, India

Corresponding author
Piyush Somani, MD, DM
Department of Gastroenterology, Jaswant Rai Speciality Hospital, Saket, Meerut, PIN-250 001, Uttar Pradesh, India
Fax: +91-121-2657154
dr_piyushsomani@yahoo.co.in

References

E276