## ACG CASE REPORTS JOURNAL

### IMAGE | BILIARY

# Ascariasis Causing Biliary Colic

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#### CASE REPORT

A 30-year-old woman presented with recurrent episodes of right upper abdominal pain for 1 month. The abdominal examination was unremarkable. She had anemia (hemoglobin: 9.2 g/dL), and the rest of the biochemical parameters, including liver and kidney function tests, serum amylase, and lipase, were normal. Abdominal ultrasonography was also unremarkable. The patient underwent upper gastrointestinal endoscopy, which revealed a live ascariasis worm invading the papilla (Figure 1). The worm was removed with the help of grasping forceps (Figures 2 and 3). She was treated with a single dose of 400 mg of albendazole. Abdominal ultrasonography after the worm removal did not reveal any other worm in the common bile duct or pancreatic duct. She did not have any recurrence of pain on 2-month follow-up.

Most ascariasis-infested patients are asymptomatic. Clinical diseases are limited to a small percentage of patients, especially those having heavy worm load. Hepatobiliary and pancreatic ascariasis is initiated because of repeated invasion of ampullary orifice by the worm. Hepatobiliary and pancreatic ascariasis can present variably with distinct clinical presentations such as biliary pain, acute cholecystitis, acute cholangitis, acute pancreatitis, hepatic abscesses, and recurrent pyogenic cholangitis.<sup>1</sup> Ultrasonography is an excellent modality to visualize ascarides in the stomach, duodenum, biliary tree, and pancreatic ducts.<sup>2</sup> Ascarides in the biliary system are seen as long, linear, or curved echogenic structure without acoustic shadowing with writhing movements appreciated in real-time ultrasonography.<sup>3</sup> Ascarides in the stomach and duodenum are well visualized in the water-filled lumen and when present in multiple numbers.<sup>4</sup> Ultrasonography has limitation in detecting single worm in the duodenal lumen and invading the ampullary orifice.<sup>4</sup> Compared with endoscopic retrograde cholangiopancreatography, ultrasonography has high sensitivity in diagnosing ascarides in the bile ducts. However, ultrasonography has limitation in the diagnosis of pancreatic ascariasis.<sup>5</sup> Better imaging modalities such as magnetic resonance cholangiopancreatography, endoscopic ultrasound, or endoscopic retrograde cholangiopancreatography are indicated in cases with high clinical suspicion. Although a number of antihelminthic drugs such as pyrantel pamoate, mebendazole, ivermectin, and levamisole have been used to effectively manage ascariasis, a single dose of 400 mg of albendazole is often the agent of choice.<sup>6</sup> Administration of anti-



Figure 1. Ascariasis invading the papilla.

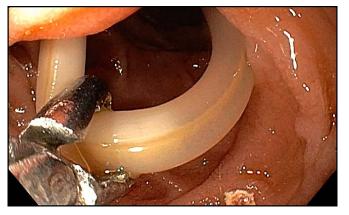


Figure 2. Ascariasis worm removed with grasping forceps.

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Figure 3. The extracted ascariasis worm.

helminthic drugs is advised after the removal of worm, as it can impede movement of the live worm out of the ducts.<sup>6</sup>

#### DISCLOSURES

Author contributions: B. Mallick wrote the manuscript and is the article guarantor. DL Parharaj edited the manuscript for intellectual content and searched the literature. P. Nath and SC Panigrahi edited the manuscript for intellectual content. Financial disclosures: None to report.

Informed consent was obtained for this case report.

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#### REFERENCES

- 1. Khuroo MS, Rather AA, Khuroo NS, Khuroo MS. Hepatobiliary and pancreatic ascariasis. *World J Gastroenterol.* 2016;22:7507–17.
- Ferreyra NP, Cerri GG. Ascariasis of the alimentary tract, liver, pancreas and biliary system: Its diagnosis by ultrasonography. *Hepatogastroenter*ology. 1998;45:932–7.
- 3. Al Absi M, Qais AM, Al Katta M, Gafour M, Al-Wadan AH. Biliary ascariasis: The value of ultrasound in the diagnosis and management. *Ann Saudi Med.* 2007;27:161–5.
- Khuroo MS, Zargar SA, Mahajan R. Hepatobiliary and pancreatic ascariasis in India. *Lancet.* 1990;335:1503–6.
- Khuroo MS. Hepatobiliary and pancreatic ascariasis. Indian J Gastroenterol. 2001;20(Suppl 1):C28–32.
- 6. Khuroo MS. Ascariasis. Gastroenterol Clin North Am. 1996;25:553-77.

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