

A case of biliary fascioliasis mimicking a common bile duct tumor (with video)

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A 41-year-old woman was referred to our department with diffuse, irregular thickening of the common bile duct (CBD), identified on an abdominal computed tomography (CT) scan that was performed for evaluation of an ovarian tumor. Her past medical history and physical examination results were unremarkable. Laboratory results were within normal limits, except for an elevated cancer antigen 125 level.

Endoscopic ultrasound (EUS) examination demonstrated spontaneously moving, mixed echogenic structures in the proximal CBD [Figure 1a, b and Video 1]. Endoscopic retrograde cholangiography revealed a suspected linear filling defect in the CBD [Figure 2a]. A sphincterotomy was performed, and several flat, leaf-like *Fasciola hepatica* worms were extracted from the bile duct, using a balloon catheter and forceps [Figure 2b and c]. A single dose of triclabendazole (10 mg/kg) was administered.

Fascioliasis, a plant-borne trematode zoonosis caused by *F. hepatica* and *Fasciola gigantica*, primarily affects cattle and sheep.^[1] The clinical course of fascioliasis is divided into the hepatic and the biliary phase. In the hepatic phase, migration of parasites through the liver parenchyma leads to pathologic alterations

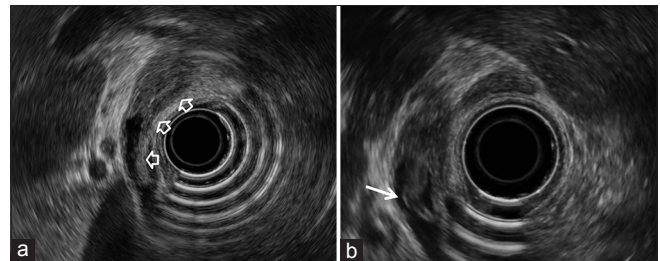


Figure 1. Endoscopic ultrasound (EUS) images showing (a) mixed echogenic material (open arrows) with duct dilatation and (b) moving spontaneously a few seconds later (white arrow) at common bile duct

in the liver and causes acute symptoms, including upper abdominal pain, fever, malaise, anorexia, and weight loss. During the biliary phase, which reflects the chronic phase of fascioliasis, the patient may be asymptomatic with normal laboratory studies – such as seen in our patient – or may experience symptoms of cholangitis, depending on the parasite burden.^[2] The diagnosis of fascioliasis is made by positive serum enzyme-linked immunosorbent assay test result against fascioliasis; detection of parasite eggs in stool, duodenal aspirates, or bile; or visualizing the adult worms during endoscopy or surgery. Although magnetic resonance cholangiopancreatography and abdominal CT scan are useful diagnostic modalities for biliary pathology,

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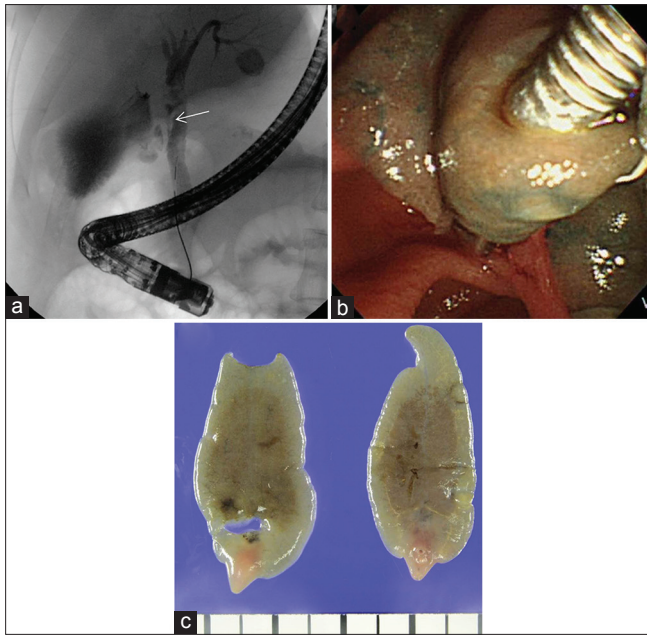


Figure 2. (a) Cholangiography through endoscopic retrograde cholangiopancreatography showing linear filling defect (white arrow) in common hepatic duct. (b) Endoscopic image showing *Fasciola hepatica* worms extracted balloon catheter from the common hepatic duct. (c) Adults of *Fasciola hepatica* with large and broadly-flattened, measuring about 15 mm wide and 30 mm long

they lack the ability to distinguish fascioliasis from other benign or malignant biliary neoplasms. EUS has emerged as an important diagnostic tool for fascioliasis because it offers real-time images, including images of spontaneously moving echogenic structures in the CBD.

In our experience, human fascioliasis should be considered in the differential diagnosis of an asymptomatic patient with CBD wall thickening. EUS may be the key diagnostic modality for investigating biliary disorders of unknown origin.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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