

Endoscopic ultrasound imaging of pancreatic duct ascariasis

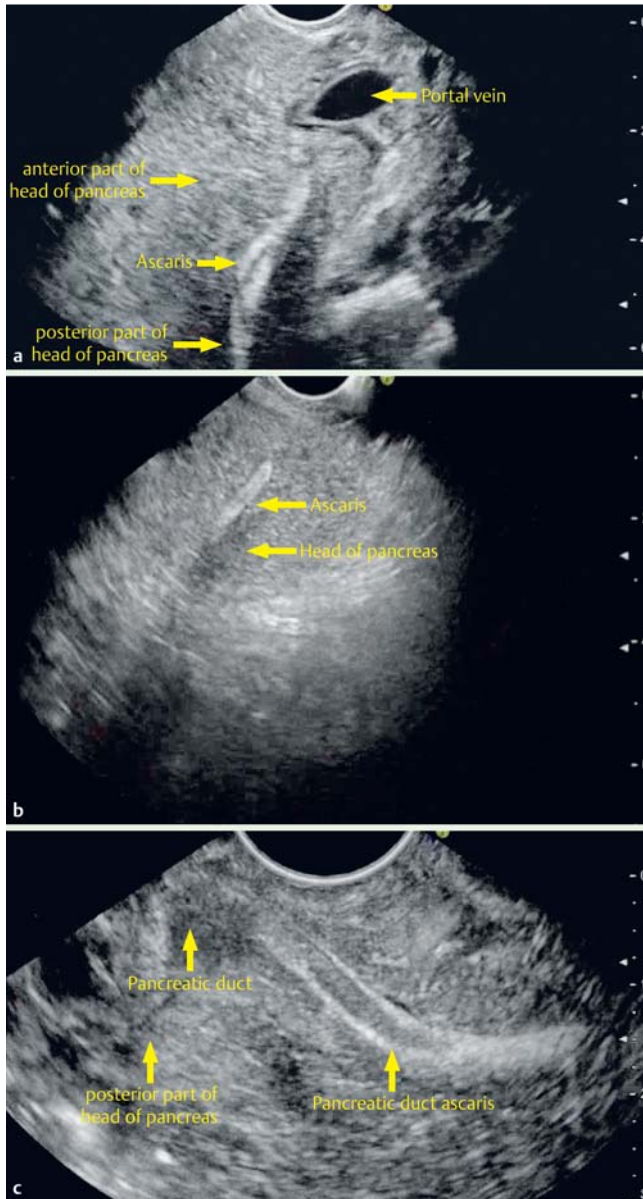
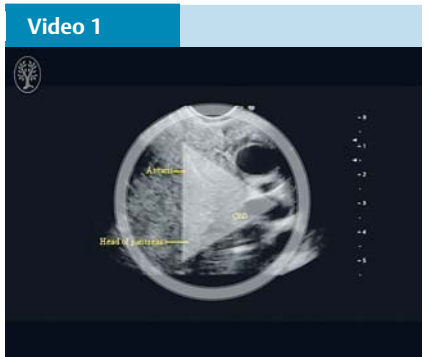


Fig. 1 Endoscopic ultrasonography (EUS) was done for investigation of idiopathic recurrent acute pancreatitis in a 30-year-old man. **a** A linear echogenic shadow was seen in the pancreatic duct within the head of the pancreas. **b** EUS from the duodenal bulb demonstrated the ascaris worm in the head of the pancreas. **c** EUS from the descending duodenum showed a linear shadow with two hyperechoic linear echogenic strips on either side of the longitudinal anechoic lumen of the ascaris worm.



Fig. 2 Side-viewing endoscopy showed two ascaris worms in the duodenal lumen; one was extruding from the papilla. They were removed with biopsy forceps.



Endoscopic ultrasonography (EUS) was done for investigation of idiopathic recurrent acute pancreatitis in a 30-year-old man. Visualizations from the stomach, the descending duodenum, and the duodenal bulb, on clockwise and anticlockwise rotation of the probe, showed features of the ascaris infestation. Side-viewing endoscopy showed two worms in the duodenal lumen, one extruding from the papilla; these were removed using biopsy forceps.

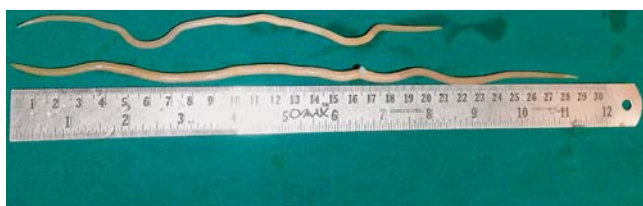


Fig. 3 Two creamy white roundworms seen after removal.

Ascaris lumbricoides infestation is endemic in tropical countries. Most infections by *A. lumbricoides* are asymptomatic, but they can produce a wide spectrum of manifestations including hepatobiliary and pancreatic complications. Pancreatic

ascariasis is a rare entity. In a study of 500 patients with hepatobiliary and pancreatic disease due to *A. lumbricoides* infection, only seven had pancreatic ascariasis [1], and there are few case reports of ascariasis-induced acute pancreatitis [2].

Mechanisms of acute pancreatitis associated with ascariasis include invasion of the pancreatic duct, the ampullary orifice, and both the common bile duct and the pancreatic duct [3].

Idiopathic pancreatitis is diagnosed when clinical, laboratory, and conventional radiologic methods do not provide a clear etiology for the episode. In the past, endoscopic retrograde cholangiopancreatography (ERCP) has been the imaging test of choice for evaluation of idiopathic recurrent acute pancreatitis, whereas now endoscopic ultrasonography (EUS) and magnetic resonance cholangiopancrea-

tography (MRCP) are advocated as safer options [4]. However, EUS should be considered as the first investigation for evaluation of idiopathic pancreatitis [5]. A 30-year-old man presented with idiopathic recurrent acute pancreatitis that had been occurring in the previous 8 months. Abdominal ultrasonography showed a bulky pancreas and MRCP findings were normal. Linear EUS was performed for evaluation of idiopathic recurrent acute pancreatitis. The pancreas was enlarged and hypoechoic, suggestive of acute pancreatitis. EUS revealed linear, nonshadowing, echogenic strips in a dilated pancreatic duct (▶ Fig. 1 a, ▶ Fig. 1 b and ▶ Video 1). An ascaris worm was seen as a linear shadow with two hyper-echoic linear echogenic strips on either side of the longitudinal anechoic lumen (▶ Fig. 1 c). Side-viewing endoscopy showed two worms in the duodenal lumen with one extruding from the papilla. The worms were removed with a biopsy forceps (▶ Fig. 2). They were 29 cm and 22 cm in length (▶ Fig. 3) and identified as *A. lumbricoides*. The patient underwent deworming with albendazole and was fol-

lowed up for 6 months with no further episodes of acute pancreatitis. To conclude, pancreatic ascariasis should be considered as a possible cause of idiopathic pancreatitis.

Endoscopy_UCTN_Code_CCL_1AF_2AF_3AZ

Competing interests: None

Piyush Somani¹, Malay Sharma¹, Amit Pathak¹, Amol Patil¹, Avinash Kumar¹, Srijaya Sreesh²

¹ Department of Gastroenterology, Jaswant Rai Speciality Hospital, Meerut, Uttar Pradesh, India

² Department of Gastroenterology, Government Medical College, Trivandrum, Kerala, India

References

- 1 Khuroo MS. Hepatobiliary and pancreatic ascariasis. *Indian J Gastroenterol* 2001; 20 (Suppl. 01): C28–C32
- 2 Mangiavillano B, Carrara S, Petrone MC et al. *Ascaris lumbricoides*-induced acute pancreatitis: diagnosis during EUS for a suspect-

ed small pancreatic tumor. *JOP* 2009; 10: 570–572

3 Khuroo MS, Zargar SA, Yattoo GN et al. Ascaris-induced acute pancreatitis. *Br J Surg* 1992; 79: 1335–1338

4 Stevens T. Role of endoscopic ultrasonography in the diagnosis of acute and chronic pancreatitis. *Gastrointest Endosc Clin N Am* 2013; 23: 735–747

5 Smith I, Ramesh J, Kyanam Kabir Baig KR et al. Emerging role of endoscopic ultrasound in the diagnostic evaluation of idiopathic pancreatitis. *Am J Med Sci* 2015; 350: 229–234

Bibliography

DOI <http://dx.doi.org/10.1055/s-0041-111030>
Endoscopy 2016; 48: E33–E34
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

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