

Case Report

Sonographic diagnosis of hepato-biliary ascariasis in a 10 year old

¹Muskan Singla, ²Poonam Ohri, ³Navtej

¹Junior Resident, ²Professor and Head, ³Senior Resident, Department of Radiodiagnosis and Imaging, Govt. Medical College, Amritsar, Punjab, India

ABSTRACT:

Ascariasis is most common helminthic infection in children. It is endemic disease in our country. They usually reside in small intestine, Rarely they migrate into bile ducts or pancreatic ducts and present as obstructive jaundice or cholangitis. Here, we report a case of biliary ascariasis in a 10 year old girl who presented with colicky abdominal pain and jaundice.

Received: 20 July, 2024

Accepted: 16 August, 2024

Corresponding author: Muskan Singla, Junior Resident, Department of Radiodiagnosis and Imaging, Govt. Medical College, Amritsar, Punjab, India

This article may be cited as: Singla M, Ohri P, Navtej. Sonographic diagnosis of hepato-biliary ascariasis in a 10 year old. *J Adv Med Dent Sci Res* 2024;12(9):71-72.

INTRODUCTION

Ascariasis is caused by the nematode *Ascaris lumbricoides* and is the most common helminthic infection, especially in the tropical and subtropical developing countries¹. The infection spreads via the oro-faecal route and hence its prevalence is more in areas with poor sanitation. The adult worm originally resides in the small intestine but can migrate through the bile duct and pancreatic ducts. Involvement of the gall bladder is very rare, constituting only 2.1% of the total cases of biliary ascariasis.²

CASE REPORT

Clinical Presentation: A 10 year old girl presented to emergency with colicky abdominal pain and jaundice.

Blood examination showed hemoglobin of 7.0 gm/dL with mildly microcytic, hypochromic red blood cells. Liver function tests showed a total serum bilirubin of 2.7 mg/dL (normal, <1 mg/dL) and alkaline phosphatase, 150 IU/L (normal, 37-147 IU/L).

Imaging Findings: An abdominal ultrasound was done which revealed a long tubular hypoechoic structure with echogenic walls in the CBD lumen from porta hepatis up till distal CBD. Gall bladder wall was thickened and lumen was filled with sludge. IHBR were not dilated. A small segment small bowel intussusception showing target sign was also demonstrated (not shown). Multiple enlarged lymph-nodes were seen in the mesentery.

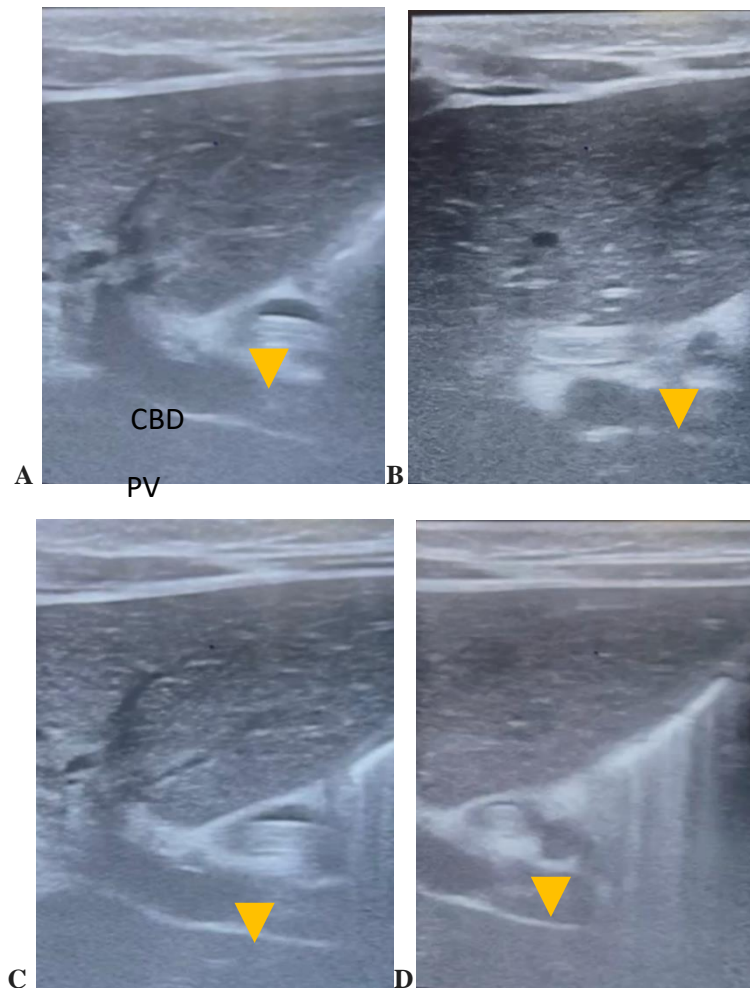


Image A,B,C) Longitudinal image shows Linear hypoechoic triple layered structure with echogenic walls giving 'inner tube sign' within dilated CBD lumen. D) Transverse section shows hyperechoic center with surrounding anechoic bile.

Follow-up: ERCP was done. A long tubular worm was removed and patient was started on antihelminthic therapy.

DISCUSSION

Hepatobiliary ascariasis arises from the migration of the intestinal parasite *Ascaris lumbricoides* from the duodenum into the biliary tree causing obstruction. HBA may present as, acute cholecystitis, biliary colic, pyogenic cholangitis, pancreatitis, obstructive jaundice, hepato-lithiasis and hepatic abscess^{3,4}. Involvement of gall bladder is extremely rare, constituting 2.1% of the total cases of biliary ascariasis². The rarity is possibly due to the narrowness and tortuosity of the cystic duct. Ultrasonography is an important non-invasive diagnostic modality for hepatobiliary ascariasis, and the appearance and movement of ascaris are characteristic⁵. Worms in the biliary tree are not easily killed by anti-helminthics as these drugs are poorly excreted in bile, and surgical interventions are often required. Still conservative management is the preferred first line treatment for these type of cases.

REFERENCES

1. Mahmoud Adel AF. Intestinal nematodes (round worms) In: Mandell GL, Douglas RG, Bennett JE, editors. Principles and practice of infectious diseases. 3rd ed. New York: Churchill Livingstone; 1990. pp. 2135–42.]
2. Javid G, Wani N, Gulzar GM, Javid O, Khan B, Shah A. Gallbladder ascariasis: presentation and management. *Br J Surg.* 1999;86:1526–7.
3. Ochoa B. Surgical complications of ascariasis. *World J Surg.* 1991;15:222–7.
4. Gomez NA, Leon CJ, Ortiz O. Ultrasound in the diagnosis of roundworms in gallbladder and common bile duct. *Repot of four cases. Surg Endosc.* 1993;7:339–42.
5. Khuroo MS, Zargar SA, Yattoo GN, Dar MY, Javid G, Khan BA, et al. Sonographic findings in gallbladder ascariasis. *J Clin Ultrasound.* 1992;20:587–91.