Biliary Ascariasis Mimicking Colonic Tumor Infiltration of the Biliary System

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Abstract Ascariasis is a common problem in developing countries with poor hygiene and sanitation. It is endemic in India and usually seen in the northern states. Biliary ascariasis is an uncommon cause of obstructive jaundice. We present a case of carcinoma of hepatic flexure of colon in which the patient developed biliary ascariasis and posed a diagnostic challenge as it mimicked tumor infiltration of the biliary system.

Keywords Ascaris · Biliary ascariasis · Obstructive jaundice

Case Report

A 52-year-old male, resident of Delhi presented to us with a 3-month history of pain abdomen and altered bowel habits (constipation predominant). There was history of significant loss of weight. There was no history of melena, hematochezia, night sweats or fever. His co-morbid illness included T2 diabetes mellitus, recently diagnosed and well controlled on oral hypoglycemic agents. Mild pallor was noted on general physical examination. Abdominal examination revealed mild tenderness in the right hypochondrium. Rest of

the systemic examination was normal. He was evaluated further. Complete blood counts showed low hemoglobin – 10.1 g/dL. Liver and kidney function tests were within normal limits. Ultrasonography (USG) of the abdomen was suggestive of a circumferential mass lesion at the hepatic flexure and ascending colon. He underwent a colonoscopy which showed growth at hepatic flexure of colon with distorted and narrowed lumen. Biopsies were taken and the histopathologic examination showed well differentiated adenocarcinoma. Metastatic workup was negative. Patient was planned for radical hemicolectomy after 10 days.

A day prior to surgery, patient was found to have icterus. Blood chemistries were sent which showed a total bilirubin of 3.1 g/dL; direct fraction was raised (2.4 g/dL). Aspartate aminotransferase and alanine aminotransferase were mildly elevated, 148 U/L and 120 U/L respectively. Alkaline phosphatase was found to be markedly elevated, 1308 U/L. Tumor infiltration of the biliary system was suspected.

USG abdomen was done which showed bilobar dilated intra hepatic biliary radicals with a linear echogenic structure in the common bile duct (CBD). Subsequently, magnetic resonance cholangiography revealed a linear filling defect in the

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Fig. 1 MR cholangiographic image showing filling defect in the CBD

CBD,? Worm infestation (Fig. 1). An endoscopy was performed which showed a long roundworm moving in the duodenum with one end inside the CBD (Fig. 2). Worm was taken out with snare. His icterus resolved and liver enzymes normalized in next 4 days. Antihelminthic therapy was given. He was then taken up for surgery.

Discussion

Ascariasis is a common health problem usually seen in developing countries because of poor standard of sanitation. The parasite resides in the jejunum or ileum. Increasing parasitic load forces the worm to migrate away to unusual locations. Biliary ascariasis is endemic in the Kashmir valley in

Fig. 2 Endoscopic image showing roundworm in the duodenum

Indiawhile in rest of the country, isolated cases have been reported. The usual manifestation of biliary ascariasis can be biliary colic, acute cholangitis, acute pancreatitis and isolated obstructive jaundice. Biliary ascariasis should be considered as a differential diagnosis in patients presenting with the above mentioned features [1–5]. Our patient developed obstructive jaundice. In this case, due to the hepatic flexure location of the tumor, infiltration into the biliary system was suspected and it was found to be *Ascaris* infestation. The management of biliary ascariasis is easy if a part of the worm is visible outside the papilla as in our case. The worm can then simply be caught and removed. However if the worm has migrated fully inside the bile duct, then endoscopic sphincterotomy is required [6].

Conclusion

The usual causes of jaundice in a patient with malignancy continue to be tumor progression with infiltration and metastasis etc. In endemic areas however, it may be worthwhile to remember biliary ascariasis as a cause of jaundice.

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Conflict of Interest We don't have any conflict of interests.

Human and Animal Rights and Informed Consent This is not a research on human participants or animals.

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