REFERENCES


INTRODUCTION

Ascariasis is a common intestinal parasitic disease in many developing countries and is a common cause of biliary and pancreatic diseases in endemic areas. Numerous studies have been published on biliary tract ascariasis. All these have documented ultrasonography as the primary imaging modality for biliary tract ascariasis. Magnetic Resonance Cholangiopancreatography (MRCP) has been the latest entrant for the study of biliary tract. MRCP findings of biliary tract ascariasis have been scarcely documented. MRCP is a unique non-invasive investigation for demonstrating ascariasis in Gall bladder and biliary tract clearly. We present MR appearances of Gall bladder and biliary tract in a proven case of biliary ascariasis.

CASE REPORT

A 16 years old girl presented with obstructive jaundice, fever and pain. Ultrasound revealed gallstones and dilated common bile duct (CBD) with suggestion of biliary ascariasis. MRCP was done for further evaluation.

The patient was subjected to MR examination documenting MRCP findings in biliary ascariasis. The MRCP findings in a proven case of biliary ascariasis are presented here. The role of MRCP in such cases is also briefly discussed vis a vis other imaging modalities.
on a 1.5 T Unit (Siemens Vision, Erlangen, Germany). Routine T2-weighted fat suppressed axial and coronal images were acquired which were followed by MR cholangiogram using TSE (Turbo Spin-Echo) and fat suppressed HASTE (Half Fourier Single-Shot Turbo Spin-Echo) sequences in the oblique, coronal and axial planes. These showed multiple linear/tubular hypointense filling defects in the gall bladder and CBD, confirming the diagnosis of roundworms in gallbladder and bile duct, with a single calculus at the lower end of CBD [Figures 1 and 2]. Stool examination showed presence of Ascaris lumbricoides eggs. The patient was given a course of albendazole; subsequently she underwent cholecystectomy and choledocholithotomy. Gall bladder contained a few membranes of worms along with multiple stones. CBD was dilated (1.5 cm in calibre) and contained membranes of worms along with a single 1.2 cm size stone.

**DISCUSSION**

Biliary ascariasis is a known cause of biliary and pancreatic system diseases in endemic areas.[1-6] Ultrasonography has been routinely used for evaluation of biliary diseases due to ascariasis and is the investigation of choice.[2,4] The only drawback that can be ascribed to ultrasonography is it’s operator dependence. The diagnosis can be missed, and false positivity due to side-lobe artefacts can also occur in non-experienced hands. Moreover, the examination can be sub-optimal due to technical factors like obesity and excessive bowel gas.

ERCP is a good modality but it is invasive and has certain well known hazards.[1] As a diagnostic modality MRCP has increased sensitivity over ERCP as gallbladder may fail to get visualized on ERCP specially if there is some blockage at Gall bladder neck. MRCP findings in present case of Biliary ascariasis are multiple linear/tubular hypointense filling defects in the Gall bladder and CBD. The morphology and signal intensity of the structures in the Gall bladder is highly suggestive of roundworms, the linear hypointensity in CBD is somewhat less specific. However in conjunction with the findings in the Gall bladder lumen, the most likely interpretation is a worm in CBD.

MRCP has established a well accepted place for itself in the evaluation of pancreato-biliary system in general.[6] MRI is a safe procedure in pregnant patients also as there is no radiation exposure. The MRCP imaging features of biliary ascariasis need to be documented so that i) Incidental discovery of biliary ascariasis on MRCP, carried out for evaluation of pancreato-biliary system for other diseases, is registered and not missed or misinterpreted; and ii) In cases where optimal ultrasonography study is not feasible, patient may be evaluated by MRCP.

We conclude that the serpentine hypointense structures in gall bladder and CBD on MRCP should bring diagnosis of biliary ascariasis into consideration. The present case report is intended to strengthen the database regarding MRCP findings on biliary ascariasis.

**REFERENCES**