Case Report

Ascariasis in the Gall Bladder - A Rare Case

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Abstract

Settlement of adult form ascariasis parasite in the gall bladder is rare constituting 2.1 % of hepatobiliary ascariasis4. Radiologic imaging methods play an important role in the diagnosis of the parasite in the biliary tree. Computed tomography (CT), magnetic resonance imaging (MRI) and endoscopic retrograde cholangiopancreatography (ERCP) are used in the diagnosis of hepatobiliary ascariasis. However, ultrasonography is still the first method and most preferred due to its ease of applicability and the fact that it is inexpensive and non-invasive. We report a rare case of Ascariasis lumbricoides present in gall bladder.

Key words: *Ascariasis lumbricoides*; gall bladder; hepatobiliary ascariasis

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Introduction

Due to the anatomy of the biliary tract ,Ascariasis lumbricoides rarely settles in the gall bladder. Ascariasis lumbricoides is more prevalent and its course is more serious in children than in adults [1]. Ultrasonography is a reliable investigative technique in biliary ascariasis. Around 1.5 million people in the world are affected by Ascariasis lumbricoides(round worm) in their digestive tract. From the intestines worms can invade the biliary tree causing cholangitis, the pancreatic duct causing pancreatitis, and the gall bladder causing acalculuscholecystitis [2,3]. Gall bladder ascariasis although less common than bile duct ascariasis due to the torturous and narrow structure of the biliary tract [1]. is quite often seen in endemic areas. Isolated gall bladder ascariasis accounts for approximately 4 % of all hepatobiliaryascariasis.Ultrasonography being safe and non-invasive is generally the first imaging method for suspected biliary ascariasis , the characteristic single , long , linear or curved echogenic structure , which might exhibit zigzag movements . There can be a distended gall bladder with sludge formation.

Summary

The 60 year old, male patient, a known case of Rheumatoid arthritis came with presenting complaints of fever, pain abdomen, generalized weakness and recurrent vomitings for one month. The patient was evaluated clinically which revealed severe pain in the epigastric and the right hypo gastric area. Ultrasonography revealed a distended, mildly thick walled gall bladderalong with sludge formation with single , long , linear echogenic structure exhibiting zigzag movements suggestive of worm consistent with ascariais in it. Other ultrasonic findings were suggestive of mild inflammatory thickening of the mesentery and the small gut with tiny right renal calculi.Routine liver function tests and the renal function tests were normal.ESR – 120 mm/1st hr.Hb – 7.6 gm %TLC – 23500.Stool examination – NAD. Albendazole 400 mg tablet/day was administered to the patient for three days , following which the patient's condition improved remarkably. The patient was managed with i.v hydration , antispasmodics and antibiotics. Five days later he was free of symptoms and recovered completely.

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Figure: ultrasonography showing linear echogenic foci

Discussion

Settlement of adult form ascariasis parasite in the gall bladder is rare constituting 2.1 % of heaptobiliary ascariasis [4]. It does not have any characteristic clinical or laboratory feature, radiologic imaging methods play an important role in the diagnosis of the parasite in the biliary tree . Computed tomography (CT) , magnetic resonance imaging (MRI) and endoscopic retrograde cholangiopancreatography (ERCP) are used in the diagnosis of hepatobiliaryascariasis . However ultrasonography is still the first method and most preferred due to its ease of applicability and the fact that it is inexpensive and non invasive. Various studies in the literature report the significance of USG in the diagnosis of ascariasis in the gall bladder and the biliary tract [1,5,7] It also helps in identifying whether the worm is alive[5]. by capturing its movements , an advantage over CT and MRI [8]. It has been noted that the ascaris parasite can sometimes be observed as a soft tissue mass in the dilated biliary tracts [9]. In addition , due to the temporay passage of the parasite in the gall bladder and the biliary tracts it has also been reported that its imaging with USG can be difficult [10,11]. Reported USG findings include long, linear or curly echogenic structures in the biliary tracts and the characteristic movements of these echogenic structures. Literature data shows that 16 – 24 % of cases had acute cholangitis [3,12,13] , 13% to 16 % had acute cholecystitis [3,13] , and 4 to 10 % had acute pancreatitis [3,12,13]. The parasite settled in the biliary tract in 34 % of the cases [3] , in the gall bladder in 1.6 to 3.7 % [3,13] , in the pancreatic duct 1.4 % [3] , in the bladder and choledochus in 12 % [13] , and in the choledochus and pancreatic duct in 3.7 % of the cases [13]. At present ERCP is reserved for already diagnosed cases in which an endoscopic removal of worms is attempted or for those cases when USG is technically inadequate [1,8]. If patients fail to respond to conservative treatment or exacerbations of symptoms occur referral for endoscopic clearance is done[13]

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