

## CASE REPORT

# GB ASCARIASIS: A RARE CASE REPORT

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### ABSTRACT

*Ascaris Lumbricoides* uncommonly presents as a cholecystitis due to anatomical considerations. Despite that, it presents in 2.1% of the hepatobiliary ascariasis. Patients usually have vague symptoms of abdominal pain sometimes with fever, mimicking cholecystitis. Ultrasonography (USG) helps in initial diagnosis. We present a case of 50 years old female with gallbladder ascariasis for which cholecystectomy was done successfully.

**Keywords:** Ultrasonography, cholecystitis, cholecystitis

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### INTRODUCTION

*Ascaris lumbricoides* is believed to be the most common intestinal parasite found in man, especially in developing countries. Though intestinal obstruction is the most encountered surgical complication resulting from the presence of the worms in the intestinal tract, any of the organs of the body may become the seat of severe and often fatal disease.<sup>1</sup> The migration of the parasite has previously been recognised and is a very dangerous aspect of ascariasis. Cases are on record in which this parasite has been found in gall bladder, biliary ducts, liver, pancreatic duct, urinary passages, fallopian tubes and even in the heart.<sup>2</sup> We present a case with co-existing ascariasis and cholelithiasis wherein ascariasis was managed conservatively followed by cholecystectomy for gall stone disease.

### CASE REPORT

A 72-year-old female patient came with complaints of pain in the abdomen since 1 month. The patient had no history of passage of worms in stools. Local examination revealed mild tenderness over the right

hypochondrium. Rest of the systemic examination was unremarkable. The laboratory investigations revealed a hemoglobin level of 11.9 g% and total leukocyte count 6600/mm<sup>3</sup> with predominant neutrophilia. Stool examination was unremarkable with negative ova and parasite test. Kidney function tests were within normal limits. Liver function tests showed serum bilirubin 0.7 mg%, serum SGOT 28 IU/l, serum SGPT 30 IU/l, and serum alkaline phosphatase 109 IU/l. Ultrasonography imaging was done which was suggestive of a tubular structure in the gall bladder lumen with numerous internal echoes, all changing in configuration with change in posture of the patient. One part of the gall bladder also showed a suspected calculus measuring 18 mm. The patient was started on conservative management in the form of antihelminthic Tablet Mebendazole for 3 days. After completing the course of treatment an MRCP was done for confirmation of clearance. MRCP report was suggestive of cholelithiasis and residual worm debris.



The patient was subsequently taken up for laparoscopic cholecystectomy. Intraoperatively, dense adhesions were noted between the gall bladder and omentum and duodenum. Post operatively, the gall bladder was submitted for histopathological examination. Grossly, the gall bladder measured 6 cm x 1.5 cm. Externally, the gall bladder was unremarkable. The wall thickness on cutting open measured 0.4 cm. Mucosa was greyish brown and ragged. Multiple mixed stones were identified. On microscopic examination, mucosa showed formation of Rokitansky Aschoff sinuses, lamina propria showed mild mononuclear cell infiltrate and perimuscular layer showed fibrosis.

## DISCUSSION

With the development of the health industry, improvement of people's living standards and enhancement of health awareness worldwide, the incidence of ascariasis has been steadily decreasing. However, in some remote rural areas, its incidence remains relatively high. Incidence of ascariasis is relatively more among rural residents.<sup>3</sup> Although infestation of the biliary tract by ascariasis is relatively a more common finding, ascariasis of the gall bladder is an even rarer condition.<sup>2</sup> Ochsner et al believed that it occurred in patients with abnormal papilla of the common bile duct.<sup>4</sup> Pre-operative diagnosis of ascariasis of gall bladder is rarely made with any great degree of certainty because it is a rare condition and symptoms do not differ in general from those of the common varieties of inflammation and obstruction. 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 hepatobiliary ascariasis.<sup>5</sup> Reported USG findings include long linear or curly echogenic structures in the biliary tracts and the characteristic movements of these echogenic structures.

Cholecystectomy has traditionally been the treatment of choice for ascariasis of the gall bladder.<sup>6</sup> However, now it has been established that initial therapy for gallbladder ascariasis should involve conservative

treatment, unless an associated disease is present or a complication arises, because some patients can be treated conservatively. Most patients need cholecystectomy later, due to the failure of the conservative therapy. ERCP can be used for the treatment of biliary ascariasis at the time of diagnosis. The operation is performed through the normal physiological channels, which not only reduces the damage to the body but also treats the common bile duct-associated diseases while eliminating the etiology, thus reducing the risk of surgery and the occurrence of complications. It however does not eliminate the risk for subsequent cholecystitis.<sup>7</sup> Indications for cholecystectomy in gallbladder ascariasis include failure of a spontaneous clearance of worms after conservative treatment, a dead worm inside the gallbladder, and worm associated with calculi.<sup>8</sup> Additionally, success of conservative therapy does not protect the patient from developing cholecystitis later. Conservative therapy with anti-helminthic agent can lead to the sequestration of the worm, which presents a high risk of developing ascending cholangitis.<sup>9</sup>

## CONCLUSION

Gall bladder ascariasis is an even rarer presentation of the less common hepatobiliary pancreatitis. Diagnosis through clinical examination is not possible due to overlapping symptoms with other gall bladder pathologies. USG, MRI and CT remain the definitive diagnostic modalities. Conservative treatment with anti-helminthic agents, endoscopic management and cholecystectomy are the available treatment options although cholecystectomy remains the most definitive and preferred management.

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