Gallbladder Ascariasis: Radiological Evaluation and Successful Elimination by Medical Treatment after Migration to the Intestine

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INTRODUCTION

Ascariasis is a common infestation in many developing countries. The adult form of Ascaris lumbricoides usually resides in the human intestinal lumen (most frequently in the jejunum and middle ileum) and does not cause symptoms (1,2). Migration of the worm into the biliary tree is not uncommon and is considered to be a frequent complication of intestinal ascariasis (1,2,3). Gallbladder involvement is very rare; it accounts for 2.1% of all biliary Ascariasis cases (4).

Ultrasonography (US) is the most commonly used diagnostic modality for this pathology (1,5-7,8). Computed tomography (CT) and magnetic resonance imaging (MRI) are also useful (1,2).

Most of the patients were treated by endoscopically or surgically (1,4). There are few reports on medical treatment (5). In this paper, we present the radiologic findings, clinical manifestations and successful medical treatment of a patient with gallbladder ascariasis.

CASE REPORT

A 26-year-old woman (419467) presented with right upper quadrant and epigastric pain and diarrhea of 8 days duration. On physical examination, there was tenderness at the right upper quadrant and epigastrium. Laboratory data showed hypochromic anemia and eosinophilia (hemoglobin: 8.4g/dl, white blood count: 5900/mm³, eosinophils: 23%). Other abnormal results were as follows: SGOT 57IU/L (normal 0-40IU/L), SGPT 52IU/L (normal 0-43IU/L) and alkaline phosphatase 157IU/L (normal 37-147IU/L).

Abdominal US (Aplo, Toshiba, Tokyo, Japan) demonstrated a non-shadowing, mobile, 5cm-long, tubular echogenic structure (Fig. 1) with a central anechoic lumen (Fig. 2) in the gallbladder.

Figure 1
Figure 1: Tubular echogenic structure in the gall bladder lumen
The biliary tree was not dilated and the choledochus epithelium was thickened. Cholecystitis secondary to ascariasis was diagnosed. Oral intake was stopped and the patient was treated conservatively with intravenous fluids, analgesic and albendazole (400mg/day) for the parasites. Patient was followed up daily by US examination. Three days later the worm had disappeared from the gallbladder. MRI (Vision, 1.5T, Siemens, Erlangen, Germany) was performed at the same day for confirmation. 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. On MRI images, there was no abnormality in the gallbladder lumen and biliary tree. It was assumed that the worm had migrated out of the gallbladder and biliary tree. At the same day the dead A. lumbricoides bodies (8x0.5 cm) and eggs were found in the patient's feces. US readily show the movement of the worm in the biliary tree and this is an advantage of US over CT and MRI.

In conclusion, US provides a simple, rapid approach for the diagnosis and follow-up of patients with Ascarisis and other imaging modalities such as MRI are rarely needed. On the other hand, in some patients, gallbladder Ascarisis can be treated by medical treatment. Therefore according to us, the medical treatment should be the initial choise before surgery.

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