Filariasis is an endemic infection seen in tropical and subtropical regions of the world that presents with lymphatic dysfunction in the form of lymphocele, hydrocele, chyluria, or groin lymphadenovarix. We report a case of filariasis with an unusual presentation of acute abdominal pain in which radiographic imaging modalities played a crucial role in diagnosis.

Introduction

Filariases are common in tropical and subtropical geographic regions. Lymphatic filariasis is caused by Wuchereria bancrofti, Brugia malayi, or Brugia timori. These are thread-like worms that reside in the lymphatic channels; clinical manifestations are related to lymphatic occlusion that causes lymphangiectasia (1). The most common presentations of lymphatic filariasis are subclinical microfilaremia, hydrocele, acute adeno-lymphangitis, and chronic lymphatic disease (2). We report an unusual presentation of filariasis as an acute abdominal condition in which the diagnosis was made with the help of ultrasonography (US), CT, and the demonstration of filarial larvae in fluid aspirated under ultrasound guidance.

Case report

An 18-year-old male presented with a complaint of acute, right-sided, abdominal pain. He had a history of low-grade fever and vomiting. Physical examination did not reveal any significant abnormality except for diffuse abdominal tenderness.

A complete blood count showed no abnormality; total leukocyte count and differential count was normal (eosinophils = 1%). US revealed dilated tubular cystic channels in the pelvis and complex, ill-defined cystic masses in the bilateral inguinal regions (Fig. 1). Mild enlargement of the liver and spleen was also noted. The patient was referred for a CT scan for further evaluation.

CT of the abdomen revealed gross, diffuse, retroperitoneal edema with multiple small tubular hypodensities causing compression over the blood vessels and the bladder wall (Figs. 2A, B). In addition, multiple enlarged para-aortic and mesenteric lymph nodes were seen. We made a provisional diagnosis of thoracic duct obstruction with gross lymphedema and lymphangiectasia.

US-guided diagnostic aspiration of fluid from the cystic lesions in the inguinal region was performed. During the workup, we obtained a history of mild scrotal swelling. High-resolution US of the scrotum revealed scrotal wall fluid with significantly mobile linear echogenic structures in it (filarial dance).

US-guided aspiration of the scrotal wall fluid was also performed (Fig. 3). The study of fluid aspirated from the inguinal lesion and scrotal wall revealed motile larvae of Wuchereria bancrofti, and this confirmed the diagnosis.

The patient was given 100 mg of oral Hetrazan (Diethyl carbazamazine) three times a day. In addition, injectable analgesics, antibiotics, and steroids were prescribed. Antifilarial treatment was continued for three weeks, after which the patient showed good symptomatic response.
Discussion

Abdominal filariasis presenting as an acute abdominal condition is very rarely seen. We have come across only one case, presenting as acute lower abdominal and groin pain (3). A few other cases that presented with acute chylous peritonitis due to lymphatic occlusion were of nonfilarial origin (4, 5).

In the workup of patients with acute abdomen discomfort, many possibilities must be considered, and they can be ruled out with the help of different investigations. In this case, though the clinical picture indicated an acute condition, blood examination (including the total WBC count, differential count, and serum amylase level) was normal.

US and CT scans of the abdomen demonstrated retroperitoneal lymphoedema and lymphangiectasia. The CT imaging features of diffuse lymphangiectasia caused by filariasis have been described (3). In spite of this, the diagnosis can be confirmed only by the presence of filarial parasites in the fluid aspirated from cystic lesions (6).

Thus, though correlation of clinical and hematological examination are thought to be required to reach a conclusion in a patient with an acute abdomen, in our case diagnosis was solely made with the help of imaging modalities (that is, US and CT) and a demonstration of filarial parasites in cyst fluid aspirated under ultrasound guidance.

Conclusion

The report highlights the role of imaging modalities (US and CT) in clinical practice. More importantly, we have demonstrated that filariasis can be a cause of acute abdominal pain. A timely image-guided aspiration of cyst fluid, and demonstration of filarial parasites in it, confirmed the diagnosis at an early stage. Because of this, the patient was placed on antifilarial drugs and has shown a significant reduction of symptoms.
Filariasis presenting as acute abdominal pain: Imaging & image-guided intervention in diagnosis

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