

# Synchronous Ruptured Amoebic Liver Abscess With Caecal Perforation - A Rare Case Presentation

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## Abstract

Amoebiasis refers to an infection caused by *Entamoeba histolytica*, a gastrointestinal infection that may or may not be symptomatic and can remain latent for years. Most infected people, perhaps 90%, are asymptomatic, but this disease can be fatal, too. Severe amoeba infection is known as invasive or fulminant amoebiasis. In invasive amoebiasis, the trophozoites penetrate the intestinal mucosa causing amoebic colitis. In about 10% of the cases, they can enter the blood stream and cause extra-intestinal amoebiasis. The invasive form is an unusual pathology and leads to life-threatening complications with high morbidity and mortality. Synchronous pathological lesions in liver and colon are rare. Still rarer is the occurrence of complicated colonic and hepatic invasive amoebiasis presenting as an acute abdomen. One such presentation of synchronous ruptured liver abscess with caecal perforation in a 64-year-old male is reported.

## INTRODUCTION

Diseases caused by *Entamoeba histolytica* manifest as acute infectious diarrhoea clinically, and pathologically as ulcerative and inflammatory lesion in the caecum and the entire colon<sup>1</sup>. The organism, during the invasive stage, gains access to the liver via the portal vein where marked tissue destruction occurs resulting in a liver abscess<sup>2-7</sup>. Liver abscess and colon perforation are the clinical syndromes associated with amoebiasis. Intraperitoneal rupture of liver abscess and caecum perforation are rare occurrences which complicate the severe form of invasive disease caused by *E. histolytica*. Management of a complicated severe form of invasive amoebiasis is challengeable<sup>8-10</sup>.

## CASE HISTORY

A 64-year-old male, a chronic alcoholic (>30 years), normotensive and non-diabetic, presented with loose stools and right-side abdominal pain for one week. On examination, guarding and tenderness were found in the right hypochondrium with right lateral chest-wall tenderness, simulating liver abscess. Digital rectal examination yielded no abnormality. Laboratory investigations revealed leucocytosis, raised blood urea and creatinine, hypoproteinemia and mild elevation of liver enzymes. Computed tomography of the abdomen revealed a ruptured huge liver abscess with free fluid and minimal right-side pleural effusion (figure 1). A provisional diagnosis of

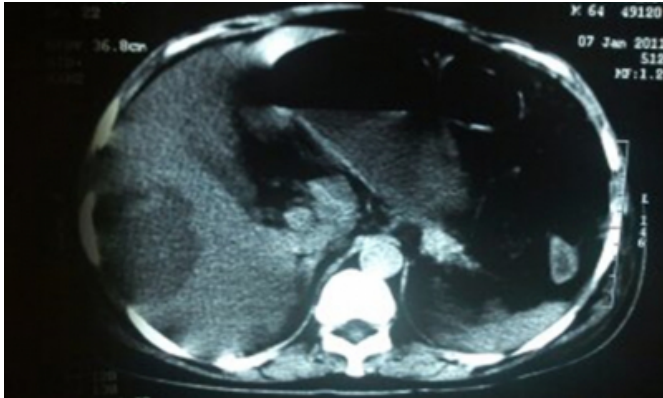
ruptured liver abscess with septicemia was made and the patient was taken up for emergency laparotomy.

Laparotomy revealed ruptured liver abscess in the right lobe (superolateral aspect), with caecal perforation (figure 2) with severe peritoneal faecal and pus contamination. During surgery, the patient went for severe hypotension, hence tube caecostomy and peritoneal toileting with tube drainage of the liver abscess cavity was performed.

After three days, after stabilizing the patient with blood transfusion, albumin infusion and under the cover of broad spectrum antibiotics and metronidazole, relaparotomy and right hemicolectomy (figure 3) with ileotransverse anastomosis (figure 4) were performed. The drain was removed on the 10<sup>th</sup> postoperative day and the patient was discharged on the 15<sup>th</sup> postoperative day. Histopathological examination of the specimen showed amoebic ulcers of the caecum with transmural involvement (figure 5).

**Figure 1**

Figure 1: Computed tomography: ruptured liver abscess cavity



**Figure 2**

Figure 2: Perforated caecum



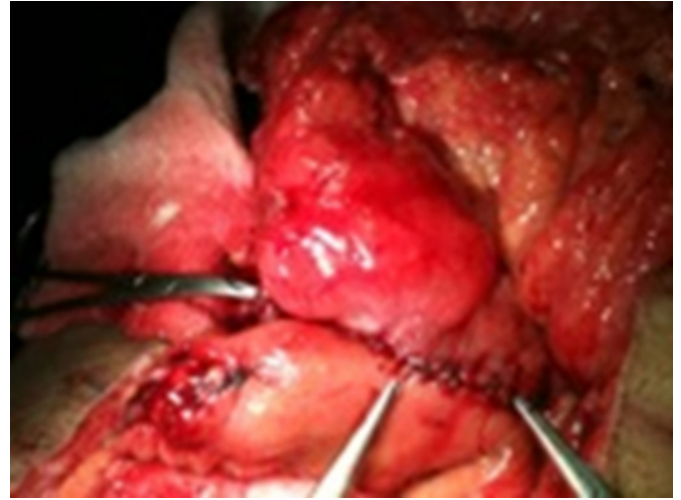
**Figure 3**

Figure 3: Right hemicolectomy specimen



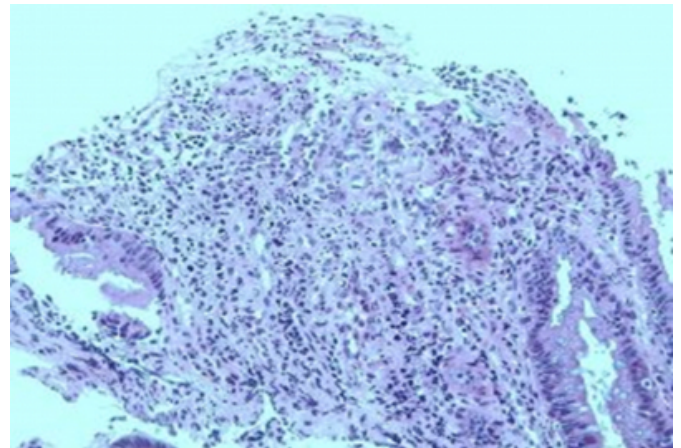
**Figure 4**

Figure 4: Ileotransverse anastomosis



**Figure 5**

Figure 5: Histopathological examination of the specimen showed amoebic ulcers of the caecum (H&E staining, x40)



## DISCUSSION

Amoebic liver abscess (ALA) is the most common manifestation of extraintestinal amoebiasis. The causative agent is a protozoan, *Entamoeba histolytica*. Ten percent of the world's population harbors *E. histolytica* in their colon, 10% of them may develop invasive amoebiasis and 1–10% of these patients develop amoebic abscess in their liver<sup>11,12</sup>. ALA is common in tropical countries<sup>13</sup> and prevalent mainly among the lower socioeconomic class living in unhygienic conditions. Poor hygiene, contaminated drinking water, malnutrition, hepatic dysfunction, low host resistance, alcohol intake, delayed or inadequate treatment are all responsible for the disease in the lower socioeconomic group. Early and correct diagnosis of ALA is imperative because delayed diagnosis and treatment leads to

complications<sup>14,15</sup>.

The diagnosis of digestive amoebiasis and systemic complication may be delayed in non-endemic areas, leading to advanced and complicated stages of the disease. The surgical approach is most efficient to treat a large liver amoebic abscess and intraperitoneal collections.

Multidisciplinary approach was the successful key in the management of the patient, including antiparasitic therapy and antibiotic prophylaxis, intensive care and multiple surgical approaches.

Faecal peritonitis with concomitant ruptured liver abscess usually leads to severe septicaemia. If not detected at an early stage, mortality and morbidity are very high. Prevention of infection and early detection may reduce the high mortality and morbidity of this disease.

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