

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

P Karthick

Citation

P Karthick. *Synchronous Ruptured Amoebic Liver Abscess With Caecal Perforation - A Rare Case Presentation*. The Internet Journal of Surgery. 2010 Volume 27 Number 2.

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 colon¹. The organism, during the invasive stage, gains access to the liver via the portal vein where marked tissue destruction occurs resulting in a liver abscess²⁻⁷. 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 challengeable⁸⁻¹⁰.

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 10th postoperative day and the patient was discharged on the 15th 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

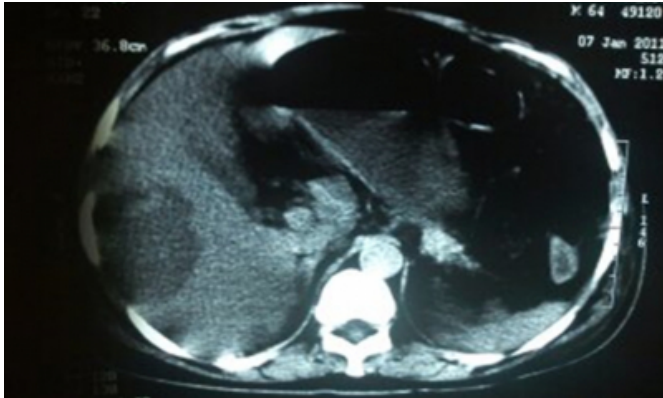


Figure 2

Figure 2: Perforated caecum



Figure 3

Figure 3: Right hemicolectomy specimen



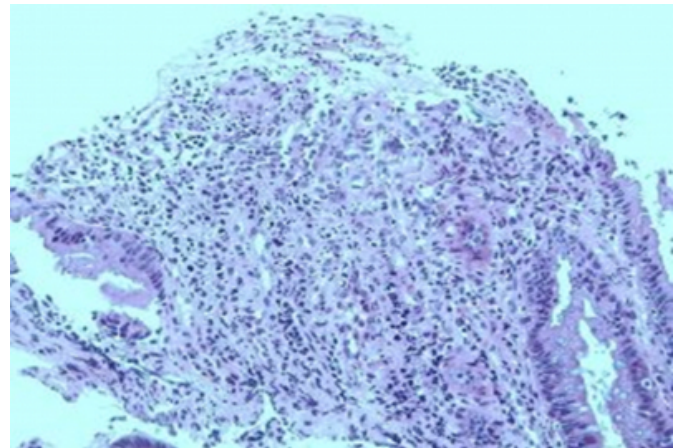
Figure 4

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^{11,12}. ALA is common in tropical countries¹³ 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^{14,15}.

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.

References

1. Petri WA Jr, Haque R, Lyerly D, et al.: Estimating the impact of amebiasis on health. *Parasitol Today*; 2000; 16: 320-21.
2. Hughes MA, Petri WA Jr.: Amoebic liver abscess. *Infect Dis Clin North Am*; 2000; 14: 565-82.
3. Ravdin JI: Amebiasis. *Clin Infect Dis*; 1995; 20: 1453-66.
4. WHO Scientific Working Group: Parasite related diarrhoeas. *Bull World Health Organ*; 1980; 58: 819-30.
5. Abd-Alla M, Wahib A, Ravdin JI: Diagnosis of amoebic colitis by antigen capture ELISA in patients presenting with acute diarrhoea in Cairo, Egypt. *Trop Med Int Health*; 2002; 7: 1-6.
6. Hoffner RJ, Kilaghbian T, Esekogwu VI, Henderson SO: Common presentations of amoebic liver abscess. *Ann Emerg Med*; 1999; 34: 351-5.
7. Huston CD. Intestinal protozoa. In: Feldman M, Friedman LS, Brandt LJ, Sleisenger MH, eds. *Sleisenger & Fordtran's Gastrointestinal and Liver Disease*. 8th ed. Philadelphia, PA: Saunders Elsevier; 2006: 2414-9.
8. Manukaran MN, Ahmad H, Abdullah I: Amoebiasis with multiple colonic perforations and ruptured liver abscess - a case report. *Med J Malaysia*; 1983; 38(1): 71-3.
9. Das S, Gupta M, Banerjee M, Khamrui TK: Simultaneous amoebic caecal perforation with ruptured liver abscess - a rare presentation. *The Internet Journal of Surgery*; 2009, Vol. 19, Number 2.
10. Walsh JA: Problems in recognition and diagnosis of amebiasis: estimation of the global magnitude of morbidity and mortality. *Rev Inf Dis*; 1986; 8: 228-38
11. WHO Meeting: Amoebiasis and its control. *Bull World Health Organ*; 1985; 63: 417-26.
12. Frey CF, Zhu Y, Suzuki M, Isaji S: Liver abscesses. *Surg Clin North Am*; 1989; 67: 259-72.
13. Gills HM, Cuschieri A: Parasitic infection of surgical importance. *Essential surgical practice*, 3rd edition, Cuschieri A, Giles GR, Moossa AR (Eds.), Butterworth Heinemann Ltd. Oxford; 1995; 243-61.
14. Adam EB, McLeod IN: Invasive amebiasis II. Amoebic liver abscess and its complications. *Medicine* 1977; 56: 324-34.
15. Meng XY, Wu JX. Perforated amoebic liver abscess. Clinical analysis of 110 cases. *South Med J*; 1994; 87(10): 985-90.

Author Information

P. Karthick, M.S.

Department Of General Surgery, Chennai Medical College Hospital and Research Centre