

## Case Report

# Hepatoduodenal fistula: A rare complication of liver abscess

Ravikant Kumar, Pavan Kumar, K. N. Saxena, Manisha Dwivedi

Department of Gastroenterology, MLN Medical College, Allahabad, Uttar Pradesh, India

## Abstract

Common complications of amebic liver abscess (ALA) include rupture into the peritoneum, thorax, and pericardium. Rupture into the duodenum is extremely rare. We report a case of ALA rupturing into the duodenum, forming a fistulous tract. To the best of our knowledge, this is the fifth endoscopically and radiologically proven case of hepatoduodenal fistula caused by liver abscess.

## Key words

Air pocket, amebic, gastrointestinal fistula, rupture

## Introduction

Amebiasis, caused by protozoa *Entamoeba histolytica*, is found worldwide.<sup>[1]</sup> Amebic liver abscess (ALA) is the most common form of extraintestinal amebiasis.<sup>[2]</sup> ALA may be complicated by rupturing into the thorax, pericardium, and peritoneum. Rupture into the duodenum is rare, and only a few cases are described in literature.<sup>[3]</sup> We report a case of ALA rupturing into the duodenum.

## Case Report

A 56-year-old chronic alcoholic male presented with a history of pain in the right upper abdomen which was mild to moderate in intensity, dull aching in character with occasional throbbing sensation with no radiation to any other site, low-grade fever for 7 days, and three episodes of vomiting of reddish-brown material on the day of admission. After vomiting, he got relief of pain to some extent. There was no history of jaundice, melena, or nonsteroidal anti-inflammatory drugs use. On examination, he was febrile and pallor was present. There was

tenderness in the right upper quadrant, and liver was palpable 4 cm below the subcostal margin. The spleen was not palpable and free fluid was absent.

The patients' hemoglobin was 9.2 g/dl and total leukocyte count was 12,600/cc with 74% mononuclear cells. Serum bilirubin was 1.40 mg/dl, aspartate transaminase/alanine transaminase was 55/64 IU/L, and alkaline phosphatase was 624 IU/L. Ultrasonography (USG) showed hepatomegaly with heterogeneous cystic lesions containing air pocket in the left lobe (segments 2 and 4) of the liver. In view of brownish vomiting, gastroduodenoscopy was performed which showed ulcer with fistulous opening in the first part of the duodenum [Figure 1]. Computed tomography scan of the abdomen showed cystic lesion with air pocket in segments 2 and 4 of the liver with communication to the duodenum [Figures 2 and 3]. ELISA for *E. histolytica* came positive.

He refused for surgical intervention and managed with metronidazole and symptomatic treatment. He improved on conservative treatment, and follow-up USG showed a decrease in the size of abscess cavity. Follow-up gastroduodenoscopy at 4 weeks showed healing of ulcer with closure of duodenal opening of fistula.

### Address for correspondence:

Dr. Ravikant Kumar, Department of Gastroenterology, MLN Medical College, Allahabad - 211 001, Uttar Pradesh, India.  
E-mail: drravi0609@gmail.com

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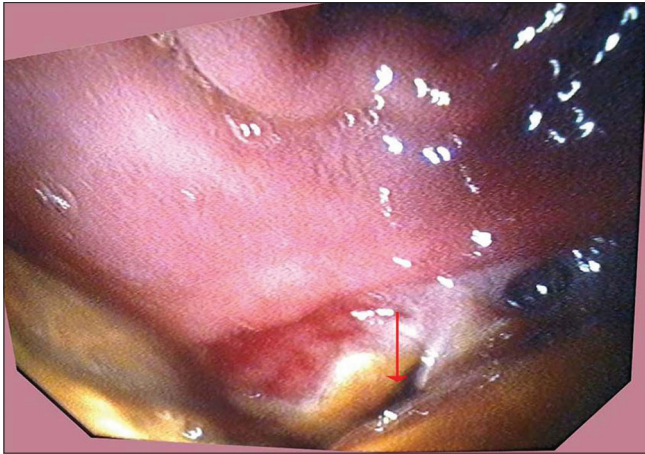
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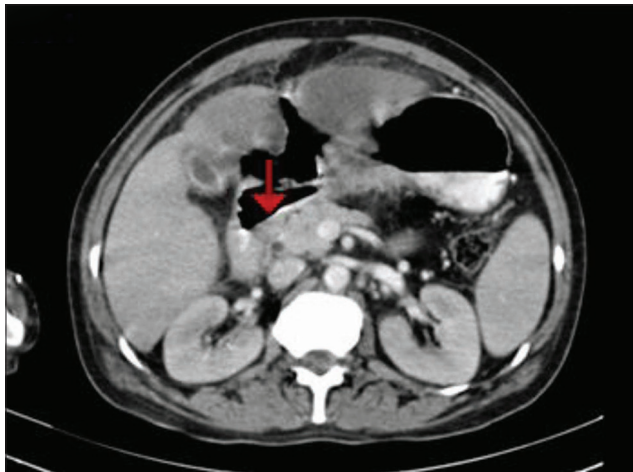
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**Figure 1:** Endoscopy image showing ulcer with opening of fistula in the first part of duodenum



**Figure 2:** Computed tomography scan of the abdomen showing abscess in the left lobe of the liver with air pockets in abscess cavity communicating with the first part of duodenum (arrow mark)



**Figure 3:** Computed tomography scan of the abdomen showing liver abscess with air pockets (arrow mark)

## Discussion

ALA is endemic in India, and its incidence varies between 3% and 9% of all cases of amebiasis.<sup>[4]</sup> ALA rupture into the pleural and peritoneal cavities is a relatively common phenomenon.<sup>[5]</sup> Rupture of ALA into gastrointestinal tract is uncommon, and only a handful of cases are reported in literature. Mowji *et al.* described the first case of ALA with hepatoduodenal fistula with radiological confirmation in 1987.<sup>[3]</sup>

The presentations of hepatoduodenal fistula secondary to ALA can be as an anchovy sauce color vomitus or stool, hematemesis, or malena.<sup>[6]</sup> In our case, vomiting of brown material raises the suspicion of fistula which was confirmed by endoscopy and imaging. Identification of the intraluminal orifice of the fistula by endoscopy is difficult without the help of other imaging modalities.<sup>[7]</sup>

Surgery is the definitive therapy, but response to conservative treatment has been described.<sup>[8]</sup> Conservative treatment includes metronidazole for clearance in the extraintestinal site and diloxanide furoate or paromomycin for luminal clearance. Spontaneous closure of fistula can be seen within 5 weeks of conservative management.<sup>[9]</sup> If no improvement is observed on conservative management or if there is clinical worsening, surgical excision of the fistulous tract is an option. Complications of hepatoduodenal fistulas include sepsis, debilitation, and electrolyte imbalance.

## Conclusion

Hepatoduodenal fistula is a very rare complication of ALA, and a high index of suspicion is required for early diagnosis, especially if patients present with an anchovy sauce color vomitus or stool. Management can be conservative or surgical. We have managed this patient conservatively.

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## Conflicts of interest

There are no conflicts of interest.

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