Hepatogastric fistula following amoebic liver abscess: an extremely rare and difficult situation

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Abstract

Introduction
Amoebic liver abscess (ALA) is the most common extra-intestinal manifestation of invasive amoebiasis. Rupture into the thoracic and peritoneal cavity is a common complication of ALA. Rupture into the stomach leading to hepatogastric fistula is extremely rare and only 15 such cases have been reported. This report discusses an extremely rare and unusual case of hepatogastric fistula following amoebic liver abscess.

Case report
We report an interesting and rare case of a hepatogastric fistula following ALA in a 35-year-old gentleman with main focus on available management options. Surgical management was done as fistula failed to heal by conservative treatment.

Discussion
Rupture of ALA into the gastric cavity leading to hepatogastric fistula is most unusual. Rapid enlargement of abscess cavity, vomiting or Ryle’s tube aspirate containing typical anchovy sauce pus, passage of amoebic pus per rectum and presence of gastric contents in aspirated material from abscess cavity may indicate hepatogastric fistula. No uniform guidelines are available for diagnosis and management of this difficult situation, as only few cases have been reported.

Conclusion
There is limited experience regarding treatment options of hepatogastric fistula following ALA due to rarity of situations and no uniform guidelines being available. Both operative and non-operative management strategies exist. If the general condition of a patient permits, a trial of conservative management should be given prior to definitive surgical therapy.

Case Report
A 35-year-old gentleman was brought to the surgical emergency with a complaint of pain in the upper abdomen for 4 weeks. He also complained of intermittent fever and vomiting for 2 weeks. On examination, he was dehydrated, afebrile and the rest of his vital parameters were in normal range. Liver was palpable 4 cm below the right costal margin in the midclavicular line and there was mild tenderness in the right upper abdomen. The laboratory studies revealed haemoglobin 9.8 g/dl and total leukocyte count of 10,900/mm³. Liver and kidney function tests were normal. Ultrasound (USG) abdomen revealed a 15 × 8 cm² liver abscess with multiple air foci in the left lobe. Computed tomography

Figure 1: CT features suggestive of large liver abscess with multiple air foci and an arrow indicating hepatic–gastric communication.
(CT) of the abdomen revealed a $15 \times 8$ cm$^2$ left lobe liver abscess with multiple air foci (Figure 1). The anterior wall of the stomach was found in close proximity to the liver abscess forming a hepatogastric fistula and gastric communication of cavity was considered for the reason of multiple air foci (Figure 1). USG-guided percutaneous drainage of the liver abscess was done under sedation and a malecot catheter was inserted in the abscess cavity. Around 250 ml of anchovy sauce pus was drained. The patient was started on intravenous ciprofloxacin and metronidazole. After 48 h of incubation, blood culture and pus culture were sterile. Serology for Entamoeba histolytica was positive. Oral fluids were allowed after 24 h, but the same oral fluid without any change rapidly came out through the malecot catheter, so the diagnosis of a hepatogastric fistula following ALA was confirmed. Upper GI contrast study and endoscopy were unable to locate the fistula. Conservative management includes nil per oral, intravenous fluids and electrolytes, intravenous ciprofloxacin and metronidazole and proton pump inhibitors was started. A nasojejunal tube was passed under fluoroscopic guidance for feeding purposes. Operative management was considered after 5 weeks of conservative management in view of refractory fistula, as drainage was not decreasing. On exploratory laparotomy, anterior surface of the stomach was densely adherent to the postero-inferior surface of the liver. The left lobe of the liver contained a large abscess cavity with a thinned out wall (Figure 2). A fistulous tract was present between the anterior surface of the distal stomach and abscess cavity (Figure 2). The distal diseased stomach containing the fistulous tract was resected and end-to-end gastroduodenostomy (Billroth 1) was done after putting a nasojejunal tube. The abdomen was closed after subhepatic and pelvic drain insertion. The patient was doing well and clear liquid feeding was started through the nasojejunal tube on the third post-operative day. Both the drains were removed on the seventh post-operative day, as drainage ceased gradually. On the 10th day, the nasojejunal tube was removed and oral feeding was started. The patient accepted oral feed well and was discharged on the 12th post-operative day. After 4 weeks, follow-up USG showed obliteration of abscess cavity. Biopsy of the resected specimen revealed inflammatory changes only. At 4-month follow-up, the patient was doing well without any recurrence.

**Discussion**

Amoebiasis occurs in 10% of the world’s population and is common in tropics. Development of ALA is in less than 1% of patients infested with E. histolytica. The diagnosis of ALA depends on the identification of space occupying the lesion of the

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**Figure 2:** Intra-operative view and tip of instrument indicating hepatic–gastric communication.
Hepatogastric fistula following ALA is an extremely rare situation and no uniform guidelines are available for its management. Imaging, including USG and CECT, are useful for diagnosis, and upper GI endoscopy or contrast studies may be added as needed. A trial of conservative management should be given prior to definitive surgical therapy.

Conclusion
Hepatogastric fistula following ALA is an extremely rare situation and no uniform guidelines are available for its management. Imaging, including USG and CECT, are useful for diagnosis, and upper GI endoscopy or contrast studies may be added as needed. A trial of conservative management should be given prior to definitive surgical therapy.

Consent
Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

References