Sporadic hepatogastric fistula - A rare complication of liver abscess -

A case report

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Section: Abdominal imaging
Area of Interest: Abdomen
Imaging Technique: CT
Special Focus: Abscess Case Type: Clinical Cases
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Patient: 60 years, male

Clinical History:

A sixty-year-old male patient presented to the out-patient department with chronic right hypochondriac pain, intermittent fever and weight loss. He was referred for ultrasound to look for intra-abdominal pathology.

Imaging Findings:

Ultrasonography - A heterogeneous avascular lesion in the left lobe of the liver with few hyperechoic areas within, suggestive of liver abscess with air pocket.
Contrast-enhanced Computed Tomography abdomen was suggested to rule out fistulous communication with air containing visceria, due to presence of air foci within the abscess.

CECT (Contrast Enhanced Computed Tomography) - A large (8 x 6 x 7.5 cm) peripheral enhancing lesion in the left lobe of the liver (Fig. 1). Loss of fat planes between the lesion and adjacent lesser curvature cranially. More caudally there was clear communication between the lesion and the lesser curvature of the stomach with an air pocket at the interface (Fig. 2, 3). Also few air pockets were noted within the liver lesion.

Discussion:

Background: Amoebic liver abscess is most common in residents of tropical countries [1]. It is not mandatory to have concurrent/preceding history of intestinal disease at the time of diagnosis of liver abscess.

Clinical Perspective: Prevalence of Entamoeba histolytica infection in India is approximately 3.6 to 47 % [1]; the wide range is due to demographic difference in the population and sample collection methods. The diagnosis is made in combination of imaging and serology. Serology is highly sensitive (94%) and specific (95%). [1, 4]
Complications like rupture into pleural/pericardial or peritoneal cavity are very common and well-known [2, 3, 5, 7]. It's very rare for a liver abscess to rupture into the stomach forming a hepatogastric fistula [2, 5, 6, 7]. Only few cases have been reported [3, 5]. Hepatogastric fistulas have also been reported in cases of hepatocellular carcinoma invading into the stomach and presenting as haemoptysis, post-embolization for hepatocellular carcinoma leading to formation of an abscess and iatrogenic hepatogastric fistula in infants with congenital obstructive jaundice [2].

Imaging Perspective: Abdominal CECT is the modality of choice and accurately delineates the endoluminal fistulous opening and also the size and content of the liver abscess. Ultrasonography cannot delineate fistulas as presence of
air precludes visualization [8]. Based on imaging findings endoscopy can further confirm the findings. Rarely upper GI contrast studies may delineate the fistula. In the majority of cases GI contrast studies fail to demonstrate communication as contrast swiftly passes into the distal bowel [2, 5]. Possible sources of air within the abscess cavity include infection with gas-forming organisms, bland tissue infarction with necrosis, enteric fistula formation and recent instrumentation or surgery [8].

Outcome: There is limited literature regarding management as the condition is extremely rare [2, 5]. Non-operative management includes nil per-oral, drainage of liver abscess, appropriate antibiotic therapy, proton-pump inhibitors, fluid and electrolyte replacement [5, 8]. Operative management includes excision of fistulous tract and anastomosis [7]. We followed a conservative management in our case. The survival rate depends on the aetiology of the fistula. In cases following liver abscess the survival rate is excellent, while in cases of fistulisation of hepatocellular carcinoma the survival rate is very low. [10]

Take Home Message:
- Hepatogastric fistula following amoebic liver abscess is an extremely rare situation and no uniform guidelines are available for its management.
- Ultrasonography and abdominal CECT are useful initially for diagnosis, and upper gastrointestinal endoscopy or contrast studies may be added as needed. Management includes both operative and non-operative options.
- It is recommended to follow a trial of conservative management before surgical management whenever the general condition of the patient permits [9].

Differential Diagnosis List: Hepato-gastric fistula following amoebic liver abscess, Hepatocellular carcinoma rupture into stomach, iatrogenic hepatogastric fistula

Final Diagnosis: Hepato-gastric fistula following amoebic liver abscess

References:

Roy Choudhury DC, Bhattacharya AK, Singh SN (1975) Unusual complication of amoebic liver abscess. Indian Med Association Apr;64(8):210–1. 4
Figure 1

Description: Axial Abdomen CECT - Abscess (black arrow) with air foci (blue arrow) in left hepatic lobe. Bilateral minimal pleural effusion. Origin: COLUMBIA ASIA HOSPITAL BANGALORE
Description: Axial Abdomen CECT - Demonstrates communication (orange arrow) between the abscess cavity in left hepatic lobe and stomach through breach in the lesser curvature. Origin: COLUMBIA ASIA HOSPITAL BANGALORE
**Figure 3**

Description: Coronal Abdomen CECT - Demonstrates communication (orange arrow) between the abscess cavity in left hepatic lobe and stomach through breach in the lesser curvature. **Origin:** COLUMBIA ASIA HOSPITAL BANGALORE