



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**AN UNUSUAL COMPLICATION OF LIVER ABSCESS : HEPATO-DUODENAL FISTULA**

**KEY WORDS:** Liver abscess, hepato-duodenal fistula, duodenum.

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**ABSTRACT**

Liver abscess is an intra-abdominal infection characterized by localized pus collection with destruction of hepatic parenchyma. When a liver abscess ruptures and extends into adjacent structures, it leads to development of complications which further increases mortality rate. Involvement of peritoneal, pericardial and pleural cavity are often noted but, extension into gastro-intestinal tract is rare and unusual; with only a limited number of cases reported, we present a recently encountered case of liver abscess. The abscess was found to be complicated by formation of fistulous tract with duodenum.

**INTRODUCTION:**

Here we present a case report on how liver abscess may present as a hepato-duodenal fistula. Some commonly encountered complications of a liver abscess are rupture into peritoneum or pleura. Liver abscess rupturing into duodenum is an extremely rare complication and not many cases have been reported till date.

**Case Report:**

A 50 year old diabetic male presented with a history of pain in abdomen which was severe in intensity, dull aching in character with occasional throbbing sensation with no radiation to any other site, low-grade fever for 2 days. There was no history of jaundice, vomiting or nonsteroidal anti-inflammatory drugs use. On examination, patient had a raised temperature of 101.3F, patient had tenderness in right hypochondrium . The patients blood work showed 11.1 g/Dl haemoglobin; 13,500/cc TLC; 2,66,000/cc platelet count; total serum bilirubin was 0.7 mg/dL; SGPT 40 U/L; SGOT 58 U/L; ALP 114 U/L.

Ultrasonography showed hepatomegaly with approximately 190 cc liver abscess with air foci in 6<sup>th</sup> liver segment. Bowel loops from terminal ileum to transverse colon were inflamed. There was minimal free fluid in perihepatic region and right iliac fossa.

CT scan showed mild hepatomegaly with a large hypodense non-enhancing focus with multiple air pockets and irregular peripheral enhancement in 5<sup>th</sup> segment of liver. An exophytic component of this lesion closely abutting the 1<sup>st</sup> part of duodenum and compressing it. While rest of the liver shows normal parenchyma.

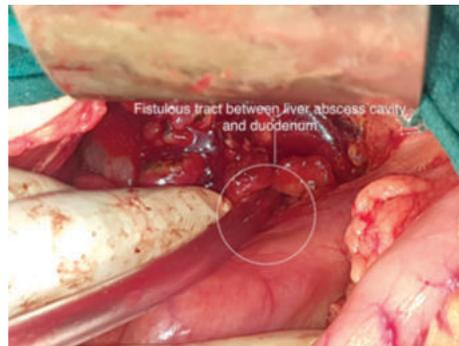


**Figure 1** fistulous tract between liver abscess and duodenum



**Figure 2** multiple air pockets in liver abscess

Patient underwent an emergency exploratory laparotomy for definitive management. On exploring the abdomen, a sealed off perforation was found in ascending colon 5 cm distal to caecum which was repaired primarily in 2 layers using vicryl sutures in first layer and silk suture in second layer; a fistulous connection was found between liver abscess cavity in 5<sup>th</sup> segment and 1<sup>st</sup> part of duodenum, here the fistulous tract was excised and the duodenal end was closed in 2 layers first using vicryl suture and second using silk suture. A drain was placed in pelvis and one in Morrison's pouch. A feeding jejunostomy was performed in the patient 30 cm distal to D-J flexure.



**Figure 3** intra op picture of hepato-duodenal fistula

Patient was given parenteral nutrition for 3 days and nutrition from FJ was initiated from 3<sup>rd</sup> day. Orally clear fluids were initiated from 7<sup>th</sup> day and from 8<sup>th</sup> day the patient was started on soft diet.

The patient recovered completely and all the abdominal drains were removed by 10<sup>th</sup> day. Patient was discharged on 15<sup>th</sup> day after removal of stitches.

**DISCUSSION:**

Liver abscess, depending upon the causative organism can broadly be classified into amoebic and pyogenic, where pyogenic liver abscess is further classified into bacterial or fungal[3]. These cases are common in men and in the older

population with underlying diabetes or other predisposing states such as malignancy, previous biliary surgery or immunosuppressive states[4].

Amoebic Liver Abscess is endemic in India, and its incidence varies between 3% and 9% of all cases of amebiasis<sup>[5]</sup> Rupture of Amoebic Liver Abscess 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>[6]</sup>

In this patient, development of entero-hepatic fistula may be due to liver abscess rupture which erodes the adjacent duodenal wall. Suspicion was raised because of the presence of air in the abscess cavity on ultrasonography following which the fistulous communication could be visualised on cross-sectional imaging, i.e., CECT scan of the abdomen [7].

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>.

With no well-defined guidelines outlined for the management of this complication, surgical management is considered definitive however conservative and supportive measures may assist in spontaneous closure of fistulas. A study that highlighted a hepato-gastric fistula complicating a pyogenic liver abscess due to a delay in its percutaneous drainage also implicated the role of early abscess drainage so as to preclude such complications [10].

#### CONCLUSION:

Hepato-duodenal fistula is an extremely rare complication of liver abscess which requires high degree of suspicion and experience to diagnose. With emergence of high definition USG and CT scan, diagnosing the condition has become possible but, per-cutaneous drainage of liver abscess in such condition has rarely yielded definitive results. Further research is warranted to define guidelines for management of such cases.

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#### Conflict Of Interest:

There is no conflict of interest.

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