

## An Unusual Cause of Liver Abscess

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### Abstract

**Introduction:** Liver abscess is an infectious space occupying lesion in liver parenchyma. It could be pyogenic or amoebic in origin. The most common source is biliary followed by abdominal infection and hematogenous spread. We describe a patient with liver abscess caused by a fish bone which penetrated into liver capsule through the gastric wall.

**Methods:** A 65 year old male presented with history of fever and mild abdominal discomfort. He was evaluated and was found to have a liver lesion on ultrasonography. Triphasic CECT scan abdomen revealed a liver abscess in segment 4 with hyper dense linear material within. Ultrasound had missed out foreign body within the abscess. On probing, there was history of fish bone ingestion a month earlier. Endoscopy did not reveal any gastric lesion or breach in mucosa. He was given antibiotics and taken up for surgery. Laparoscopic liver abscess drainage was done and foreign body- fish bone was noted within the abscess. Patient improved clinically and was doing well on follow up.

**Conclusion:** Liver abscess due to fish bone penetrating liver capsule through stomach is very rare. The transgastric penetration of foreign body should be kept in mind whenever there is unusual cause of liver abscess with foreign body within. CECT abdomen may be more helpful than an ultrasound abdomen.

**Keywords:** Liver abscess; Fish bone; Transgastric penetration; Triphasic CECT abdomen; Laparoscopic drainage.

## INTRODUCTION

Liver abscess is infectious space occupying lesion in liver parenchyma. It could be Pyogenic or Amebic origin. The most common source is biliary

followed by abdominal infection and hematogenous spread. We describe a patient with liver abscess caused by a fish bone which penetrated into liver capsule through gastric wall.

## CASE DETAILS

65 year old male presented with history of fever and mild abdominal discomfort. He was evaluated and was found to have a hypochoic liver lesion on ultrasonography. Triphasic CECT abdomen revealed a liver abscess in segment 4 with hyperdense linear material within. On probing, there was history of intake of fish bone a month earlier. Endoscopy did not reveal any gastric lesion or breach in mucosa.

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He was given antibiotics and taken up for surgery. Laparoscopic Liver abscess drainage and a foreign body -3.5 cm fish bone was noted within the abscess, which was removed. Patient improved clinically and was doing fine on follow up.

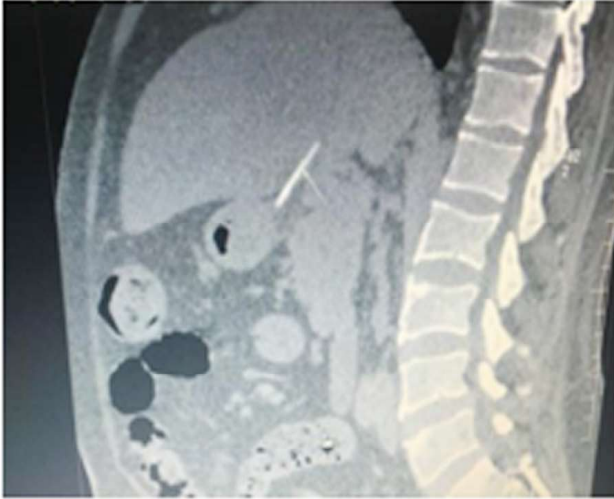


Fig. 1: Linear density in Liver

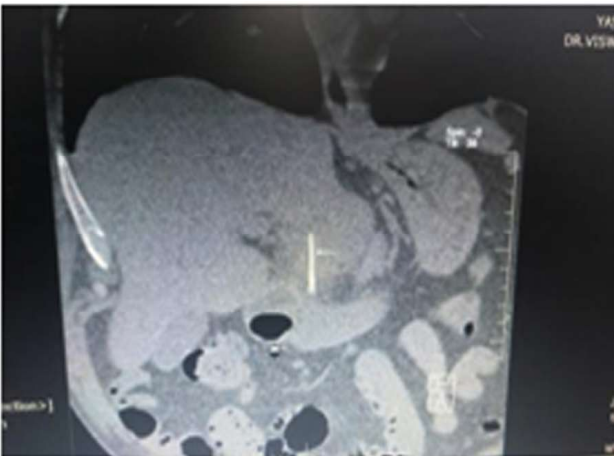


Fig. 2: Linear density in Liver

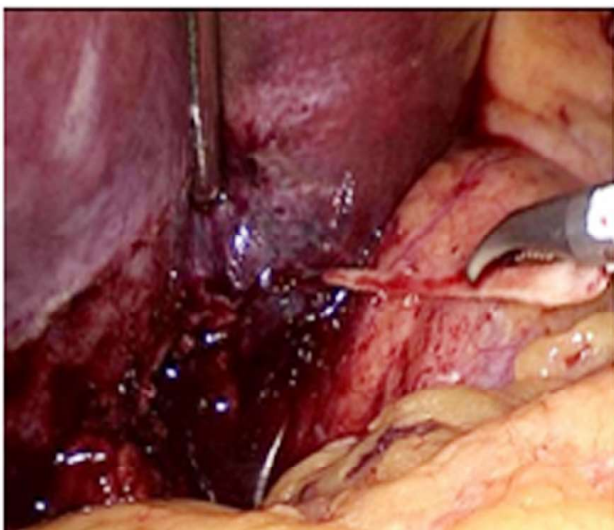


Fig. 3: Laparoscopic removal



Fig. 4: Fish bone

## DISCUSSION

Liver abscess is the most common visceral abscess which is actually an infectious space occupying lesion in liver parenchyma.<sup>1</sup> It could be Pyogenic or Amebic origin. The most common source is biliary followed by abdominal infection and hematogenous spread from bacteremia or infective endocarditis. In tropical countries, Amebic liver abscess is the more common variety found. Some rare causes of Liver abscess include Melioidosis, Tuberculosis, penetrating trauma and surgery related. Risk factors include diabetes mellitus, underlying hepatobiliary like gall stone disease, pancreatic disease, liver transplant, and regular use of proton pump inhibitors. Immunocompromised patients like HIV, Chronic Granulomatous Disease are also prone to develop Liver abscess.<sup>2,3,7-9</sup> East Asians may develop Klebsiella pneumonia related primary invasive liver abscesses. There is another unique feature about liver abscesses caused by K. Pneumoniae which appear to have a stronger association with colorectal cancer.<sup>10,11</sup> Most pyogenic liver abscesses are polymicrobial; mixed enteric facultative and anaerobic species are the most common pathogens. Anaerobes are probably under reported.<sup>2</sup>

Our case was unique in terms of the cause of Liver abscess was fish bone which penetrated gastric wall and migrated into Liver and caused it.<sup>12, 21-25</sup>

The clinical presentation of liver abscess is similar in all types Fever, pain abdomen and hepatomegaly with or without jaundice. Nausea, anorexia, malaise may be associated.<sup>2,14</sup> Abdominal tenderness in right upper quadrant, hepatomegaly, intercostal tenderness, or jaundice may be noted. Presentation can be with septic shock or peritonitis if there occurs a free rupture of abscess. Leukocytosis and Liver function test abnormalities may be noted. Imaging will clinch the diagnosis.<sup>15</sup>

CT abdomen is more sensitive than ultrasound abdomen in diagnosing liver abscess.<sup>16-18</sup> The

mainstay of treatment is Antibiotics combined with drainage of abscess. Oral or parenteral antibiotics for 4-6 weeks is recommended.<sup>2,3,13</sup> Traditionally, percutaneous drainage of liver abscess is done in cases with features of impending rupture or left lobe abscess or not improving clinically with conservative management for 72 hours.<sup>19</sup> If complicated course like ruptured abscess, then surgical management is indicated. There are less than 53 case reports of fish bone related Liver abscesses reported in literature.<sup>12,21-25</sup>

Our case was given antibiotics and later underwent Laparoscopy, drainage of the abscess and removal of the fish bone. Patient recovered well and had a good outcome. Proper imaging guided us in diagnosing the condition. Ultrasound had missed out on the foreign body inside the abscess which was clearly visualised on the CT scan.

## CONCLUSION

Liver abscess due to fish bone penetrating liver capsule through stomach is very rare. The pathophysiology should be kept in mind and proper contrast enhanced CT scan of abdomen needs to be done to look for foreign body in abscess, whenever there is no obvious predisposing factor or unsatisfactory response to treatment.

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