Case Report

Fish bone induced liver abscess: a rare case report

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ABSTRACT

Liver abscess due to perforation of the gastrointestinal tract by a foreign body is a rare and possibly fatal event. Diagnosing this pathology is complicated by the lack of specific symptoms and ignorance of ingestion by the patient and low clinical suspicion of this condition. The authors report a case of 35-year-old woman who was admitted with abdominal pain and fever. Further investigation revealed hepatic abscess, without resolution despite antibiotic therapy, secondary to fish bone ingestion with consequent piercing of the lesser gastric curvature which was diagnosed by surgery. The literature concerning foreign body-induced perforation of the gastrointestinal tract complicated by liver abscess is reviewed.

Keywords: *Liver abscess, perforation of gastrointestinal tract, fish bone, laparoscopic surgery.*

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INTRODUCTION

Foreign body ingestion is a common occurrence, majority of these pass without complications.[1] An estimated 1% of ingested foreign bodies result in gastrointestinal perforation. These are often sharp objects, such as fishbones.[2] The sites of perforation vary, with the recto-sigmoid or ileo-colic regions being the most common.[3]This potentially serious condition is a major diagnostic and therapeutic challenge. The difficulty in recognizing this condition is due to the non-specificity and variability of possible symptoms, the difficulty of evidence of the foreign body through conventional imaging and the low clinical suspicion inherent to its rarity. We report a rare case of perforation of the lesser gastric curvature after fish bone ingestion, with involvement of the left lobe of the liver and consequent formation of pyogenic hepatic abscess.

CASE REPORT

A 35-year-old lady presented with 8-months history of intermittent epigastric pain that progressively worsened along with nausea, anorexia and more recently developed high grade continued fever associated with chills and rigor. There was no history of vomiting, chest pain, jaundice, respiratory or urinary complaints. There was no significant past medical history to note.

Physical examination revealed stable vital signs except raised temperature. On abdomen examination there was a tender intra-abdominal mass involving epigastric region without any organomegaly or lymphadenopathy. Systemic examination was unremarkable. Complete blood count (CBC) revealed neutrophilic leucocytosis with low haemoglobin level. Liver function test was normal along with normal serum amylase, lipase. Ultrasonogram

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(USG) of whole abdomen and endoscopy of upper GIT reported as normal. Computed tomography (CT) scan of abdomen revealed irregular thickening of lesser curvature of stomach, distorted liver wall due to infiltration. Comment was cholangiocarcinoma or hepatocellular carcinoma (HCC) or carcinoma stomach with possible infiltration to surrounding organ. Tumour markers including CA 19.9, CEA, AFP, CA 125-all were negative. Viral markers for hepatitis B and C were also negative. Chest X-ray was normal. CT guided fine needle aspiration cytology (FNAC) from the epigastric mass revealed chronic abscess with incidental finding of calcification or foreign body. Pus for culture revealed no growth and GeneX-pert was negative.

Laparotomy was performed through upper midline incision; an abscess was present at segment 3 and 4b of left hemi-liver. Hepatic resection was done. A fish bone, 3 cm in size was found within the resected liver segment. Cholecystectomy was done. Histopathological examination revealed dense infiltration of acute and chronic inflammatory cells. The surrounding areas of liver parenchyma showed fibrosis and infiltration of chronic inflammatory cells within portal tracts. No granuloma or malignancy was seen. Diagnosis was consistent with liver abscess. Histopathological examination of lymphnode revealed infiltration of foamy histiocytes and foreign body giant cells. The surrounding fibrous tissue shows hyalinization and tiny foci of dystrophic calcification. No granuloma or malignancy was seen. So final diagnosis was foreign body (fish bone) induced liver abscess with chronic cholecystitis. During her admission period we treated her with broad spectrum injectable antibiotics Inj. Meropenem Inj. Amikacin , Inj. Metronidazole for 2 weeks along with supportive treatment followed by oral Linezolid and Cefixime for 4 weeks.

Her post operative recovery was good without any complications. On 5th postoperative day patient was discharged. She was well on her first post-operative follow up.

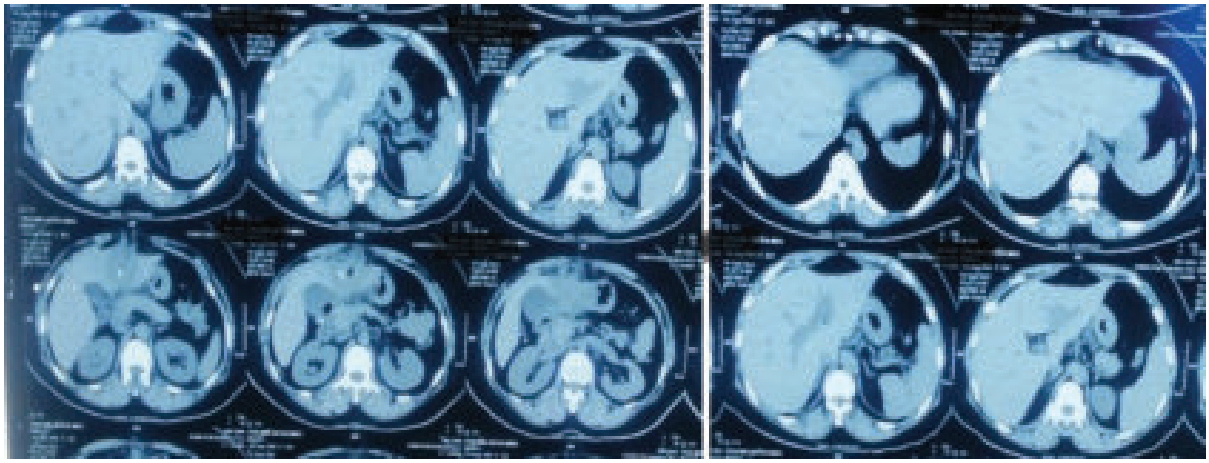

Figure 1. CT scan of abdomen axial view showing irregular thickening of lesser curvature of stomach, liver wall is distorted.

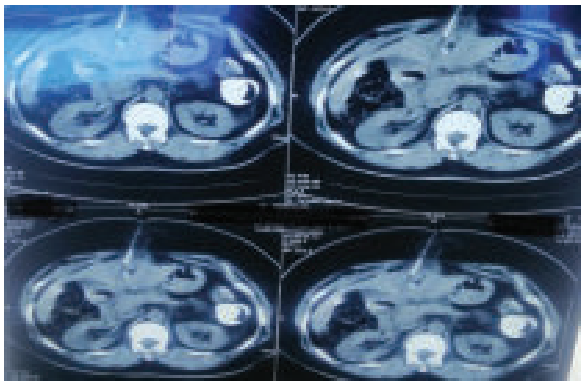

Figure 2. CT guided FNAC from abscess cavity

DISCUSSION

was originally described in 1898 by Lambert.[4]About 80%-90% of ingested foreign bodies pass through the gut without discovery within 1 week.[5,6,2]When symptoms arise, they are usually secondary to obstruction.[5,6] Gastrointestinal perforation has been reported in less than 1% of patients[2,7,8] and the most commonly affected areas are the ileo-caecal and recto-sigmoid regions and duodenum. Development of hepatic abscess due to penetration induced by a foreign body is even rarer, the first case was published in 1898.[4,9] Since then, the world literature recorded 46 cases

reported until now. The most common sites of perforation of the gut are stomach and duodenum which can be induced by sharp foreign bodies like fish bones, chicken bones, needles or toothpicks although pens or dental plates have also been reported.[2,6-10] It is difficult to establish the time until the onset of symptoms as patients rarely recall the episode of ingestion and the migrating foreign body may remain silent until an abscess formation.[2,5,7,8]

Most patients have non-specific symptoms such as abdominal pain, fever, vomiting, anorexia or weight loss which are features of a systemic response against an infection or abscess formation.[2,8,11] Furthermore, the classical presentation of hepatic abscess (fever, abdominal pain and jaundice) is only present in a few cases.[8]The results of routine laboratory studies are also non-specific and unless the foreign body is radio-opaque it will not be identified on plain radiography.[2,7]

An abdominal USG or CT scan is preferred techniques for the diagnosis, the latter is excellent in detection of foreign bodies due to its high resolution and accuracy.[2,5,6] Endoscopy may be helpful when performed early, before the foreign body migration and mucosal healing.[6,12]Endoscopy does not allow examination of the mid-gut, therefore, pre-operative diagnosis is difficult and a high degree of suspicion is required.[5-7]

We reviewed literature on liver abscess caused by foreign body. We found that fish bones were the most common foreign body and the stomach was the principal site of perforation. Abscess formation occurs more often on the left lobe. Microorganisms isolated on abscess or fluid cultures are usually part of the normal flora of human oropharynx.[2,8,9,13-15] Prognosis depends on a rapidity of diagnosis.[8,9] Bekki et al. showed that liver abscess caused by a foreign body require multidisciplinary treatment.[16] In all cases the position of abscess was in left lobe and position of foreign body in margin of the liver, all cases was managed with surgical removal with drainage of abscess without any recurrence. Our clinical report is similar to the world literature and emphasis the difficulty of diagnosing such an entity. Our patient, who did not recall the ingestion, had non-specific symptoms and laboratory results as well as USG and CT showed a hepatic abscess on the left lobe and its fistulous track. The diagnosis was obtained after exploratory laparotomy. Considering all issues we suppose that the fish bone perforated through the pylorus.

Hepatic abscess treatment includes aspiration and antibiotic therapy.[2] Patients are often unaware of the ingestion. In a hepatic abscess that does not respond to aspiration and antibiotic therapy we should look for aetiology. Despite its rarity we should consider a foreign body and surgical therapy. Surgery still has a major role in the diagnosis and treatment of hepatic abscess induced by foreign body.

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Consent: Informed written was taken consent to publish this case.

Conflicts of interest: Nothing to declare

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