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Case Report

Pyogenic liver abscess leading to diaphragm perforation following hematogenous transmission due to foreign body in gut: Case Report

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Abstract

Pyogenic liver abscess is a serious problem with significant morbidity. Most common causes are iatrogenic and ascending billiary infections. We present interesting case of 16 years old male with a pyogenic liver abscess leading to diaphragm perforation due to foreign body lodged in jejunum. Initially the patient was misdiagnosed as pneumonia by physician, referred to surgery opd for further evaluation. On subsequent return to opd for pain right hypochondrium, generalized abdomen pain and high grade fever and cough. During the examination of the patient erect x-ray abdomen showed nail in small gut, CT scan showed liver abscess but also inflammatory mass in RIF, nail lodged in it. Patient was not giving any history of nail ingestion. This kind of case has not been reported earlier.

Keywords: Hepatic abscess, pleural effusion, diaphragm perforation.

INTRODUCTION

Pyogenic liver abscess due to foreign body is a rare cause of abdominal pain. The estimated annual incidence is 2.3 cases per 100,000 people6.Billiary tract disease is the most common cause of pyogenic liver abscess 6. Enterohepatic migration of a foreign body to liver is very rare. Ingestion of foreign body is a painless event; it complicates preoperative diagnosis in most patients1. Due to the variability of clinical presentation and non specificity of complementary examinations it is difficult to make early diagnosis by laparotomy in most of the cases2. Hepatic abscess leading to diaphragmatic perforation is very rare.

Liver abscesses due to ingestion and migration of a foreign body is rare; only 60 cases had been reported in 2010. In 44 % cases, liver abscess was due to ingestion of fish bones. Direct penetration of the foreign body through the gastrointestinal tract is the common cause, stomach is the most common site, it can also be due to secondary focus of infection through bacteraemia or ascending cholangitis from a distant site of perforation or inflammatory mass formation 3.

A case is described here to highlight the unusual case of pyogenic liver abscess leading to diaphragmatic perforation secondary to ingestion of foreign body.

CASE REPORT

A 11 years old male resident of Gujranwala presented in outpatient department on 9th January, 2019 complaining of, pain right hypochondrium, high grade fever and cough for the past 15 days. Previously he visited medicine opd for similar complaints and was diagnosed as case of pneumonia. Patient was referred to surgery opd for evaluation. On examination, patient was dehydrated, febrile, had tachycardia, normal blood pressure and respiratory rate of 16 breaths/minute. Abdominal examination revealed guarding and tenderness in right hypochondrium.

His plain abdominal x-ray showed evidence of nail in small bowel (Figure 1). His blood picture showed a total leucocyte count of 20.7 x 10^3/dL. Hemoglobin, platelet

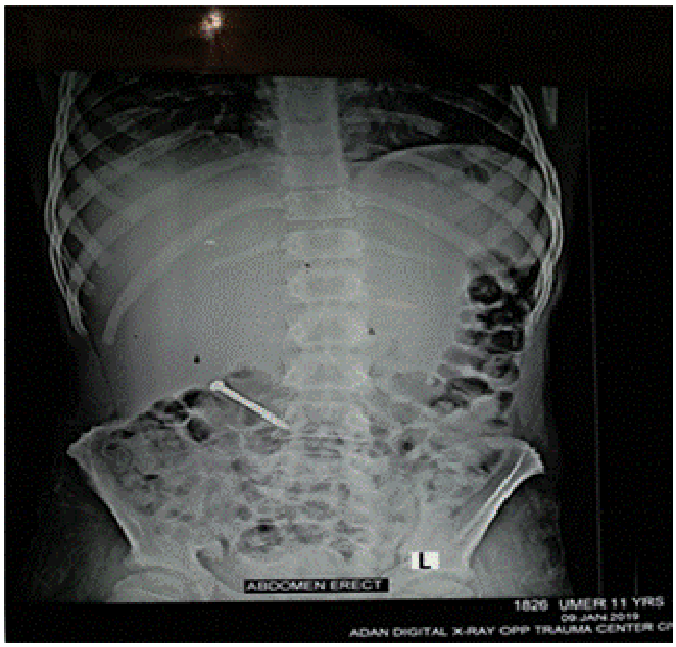

Figure 1. Plain abdominal x-ray showing evidence of nail in small bowel.

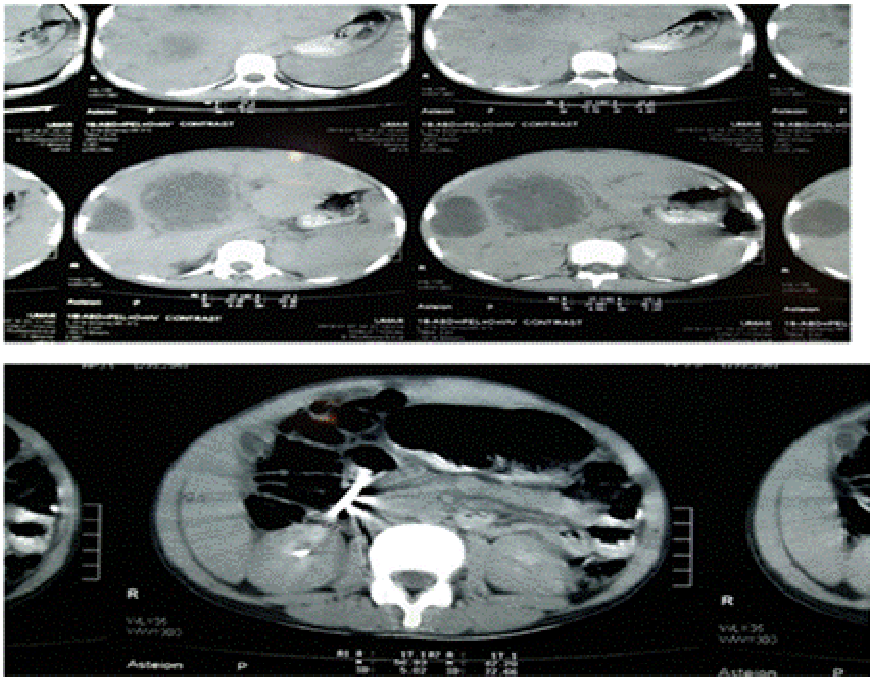

Figure 2 and 3. Multiple hepatic abscess, and nail in small bowel mass around it.

count, serum amylase and liver function tests were within normal range. Renal function tests were also normal except potassium levels that were markedly decreased (2.6mmol/l). He was admitted, placed nil per orum and managed conservatively by instituting intravenous fluids, potassium replacement, analgesics and antibiotics. Pain and tenderness persisted despite treatment. A contrast-enhanced CT scan of abdomen was carried out three days after admission. It demonstrated multiple hepatic abscess, and nail in small bowel mass around it. (Figure 2, 3). Chest xray showed pleural effusion.

Exploratory laparotomy revealed 300ml pus in peritoneal cavity, multiple hepatic abscesses, one ruptured, diaphragmatic perforation. (Figure 3). Nail was

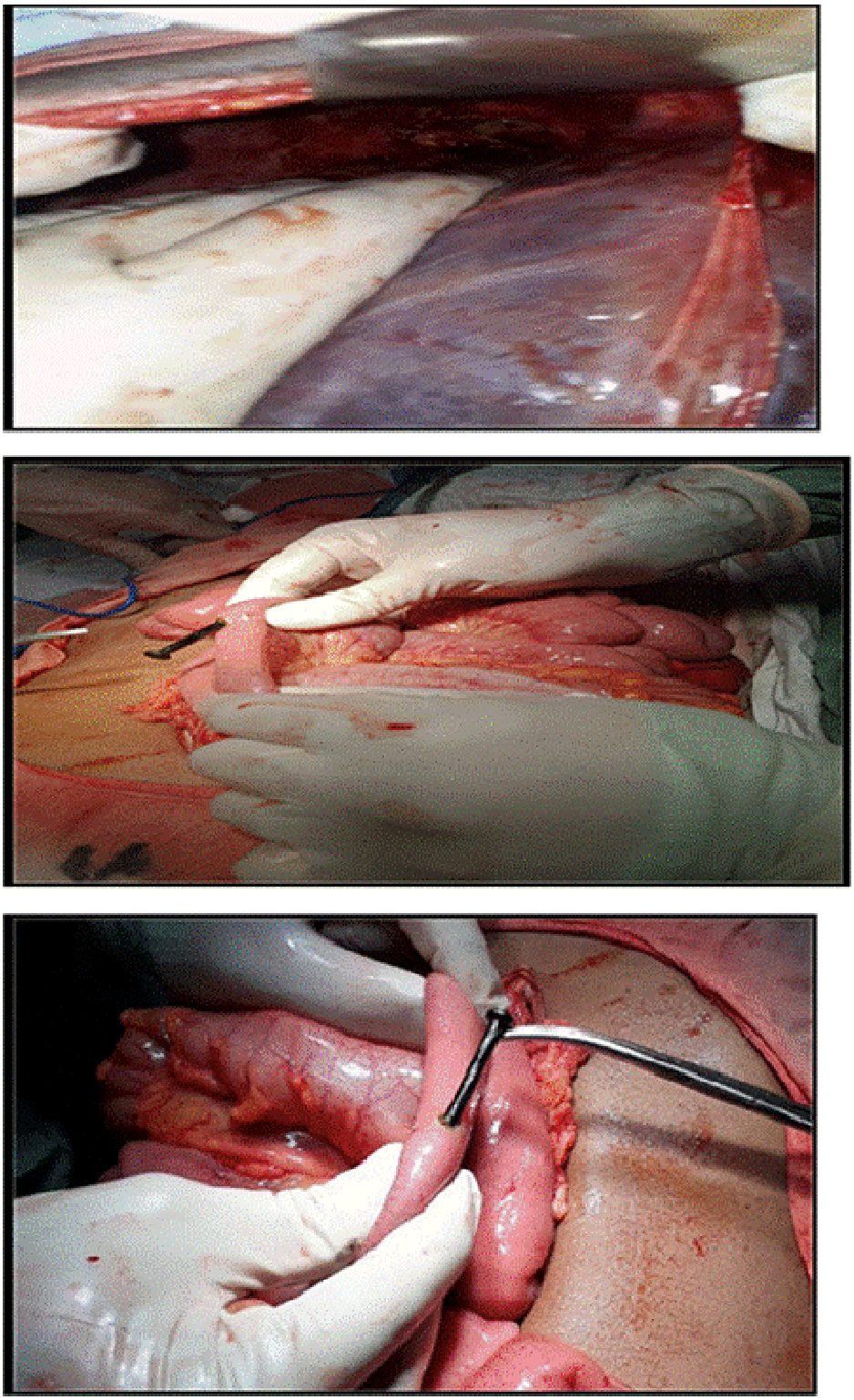

Figure 4. Nail was removed and the enterotomy repaired in two layers.

found in jejunum. An enterotomy was made to reveal a nail. Nail was removed and the enterotomy repaired in two layers (Figure 4).

Abscesses were drained, chest intubation done, diaphragmatic repair done with prolene .Abdomen washed with normal saline.

The patient had an uneventful post op recovery and he was discharged on seventh postoperative day.

DISCUSSION

Pyogenic Liver abscess is a common cause of febrile abdominal pain and causes are ascending cholangitis, hematological diffusion, via the portal vein or the hepatic artery, or due to super infection of necrotic tissue. Pyogenic abscess with no obvious systemic cause may be due to the migration of an ingested foreign body (Panebianco et al., 2015).

Mostly ingested foreign bodies pass through the gut without any findings within 1 wk in about 80-90% cases. Usually symptoms arise secondary to obstruction. Gastrointestinal perforation is rare, has been reported in less than 1% of patients. The most common areas are the ileocecal junction, recto sigmoid junction and duodenum. Formation of hepatic abscess due to penetration of a foreign body is even more rare, the first case was published in 1898 (Santos et al., 2007). Since then, 50 cases have been reported until now (Aguilar et al., 2011). Perforation of the gut can be induced by sharp foreign bodies like fish bones, chicken bones, needles or toothpicks. Perforation secondary to pens or dental plates have also been reported. Most common sites are stomach and duodenum (Santos et al., 2007).

We have found no case reported in literature, pyogenic liver abscess leading to diaphragmatic perforation, secondary to ingestion of foreign body. It is difficult to make diagnosis before surgery, because most of patients do not remember ingestion and clinic findings are non specific .Due to advancement of imaging techniques, it is increasingly easy to get to it. As in our case, CT is gold standard to nowadays for diagnosis of hepatic abscess secondary to foreign bodies (Aguilar et al., 2011).

Surgery is the recommended treatment, exploratory laparotomy is done to drain the abscess and remove the foreign body (Tsai et al., 2018). In our case, hepatic abscess was drained, foreign body removed and diaphragmatic perforation repair was done followed by chest intubation.

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