Laparoscopic retrieval of a fishbone migrating from the stomach causing a liver abscess: Report of case and literature review

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INTRODUCTION

Ingestion of foreign bodies (FBs) is a common misfortune worldwide. Fishbone migration from the gastrointestinal tract into the liver is an unusual cause of liver abscess. We present a 66-year-old woman who presented to the emergency department with epigastric pain, with no other relevant anamnestic details. Computed tomography scan revealed a liver abscess, secondary to stomach perforation from a long, sharp object. Diagnostic laparoscopy revealed a fishbone protruding from the left lobe of the liver. The FB was extracted and the liver abscess incised and drained laparoscopically with no operative and post-operative complications. Migration of FB into the liver is a rare occurrence. Treatment of such liver abscess must include the extraction of the FB. Laparoscopy in these cases is feasible and safe and may prevent unnecessary exploratory laparotomy.

Abstract

Ingestion of foreign bodies (FBs) is a common misfortune worldwide. Fishbone migration from the gastrointestinal tract into the liver is an unusual cause of liver abscess. We present a 66-year-old woman who presented to the emergency department with epigastric pain, with no other relevant anamnestic details. Computed tomography scan revealed a liver abscess, secondary to stomach perforation from a long, sharp object. Diagnostic laparoscopy revealed a fishbone protruding from the left lobe of the liver. The FB was extracted and the liver abscess incised and drained laparoscopically with no operative and post-operative complications. Migration of FB into the liver is a rare occurrence. Treatment of such liver abscess must include the extraction of the FB. Laparoscopy in these cases is feasible and safe and may prevent unnecessary exploratory laparotomy.

Keywords: Abscess, foreign body, gastrointestinal tract, liver

INTRODUCTION

Ingestion of foreign bodies (FBs) is a common misfortune worldwide, occurring in all age groups, with special consideration in children and mentally impaired adults. Most ingested FBs pass through the gastrointestinal tract uneventfully; however, serious complications may occur, including bowel perforation, intestinal obstruction and gastrointestinal bleeding. Extra-luminal migration of ingested FBs is a rare occurrence. Diagnosis is difficult as patients are often unaware of the FB ingestion and clinical presentation and imaging are usually non-specific.1-4 Although clinical outcome is typically good, 10%–20% will require endoscopic removal and less than 1% will need surgical intervention. We present a case of a 66-year-old woman presenting with liver abscess secondary to transgastric fishbone migration into the liver, treated with laparoscopic retrieval of the FB and drainage of the abscess.

CASE REPORT

A 66-year-old woman presented to the emergency department (ED) with the chief complaint of epigastric pain. The patient had no previous abdominal surgeries.

Several days before the current admission, the patient presented to her general practitioner with abdominal
pain and abdominal tenderness; blood analysis revealed leucocytosis and elevated C‑reactive protein (CRP) of 150 mg/dL (0–5mg/dL); therefore, the patient was referred to the ED.

In the ED, the patient presented with intermittent progressively worsening epigastric pain with asthenia and anorexia. No history of fever, chills, nausea, vomiting, or jaundice was noted.

On presentation, vital signs were within normal limits. Her abdomen was soft with epigastric tenderness and no organomegaly.

Blood analysis revealed neutrophilia of 80% and CRP of 200 mg/dL (0–5 mg/dL), while liver function tests were within normal limits.

Computed tomography (CT) showed thickening of the pylorus and haziness of the hepatico-duodenal ligament. A hypodense lesion of 35 mm suspected to be a liver abscess was shown in the left lobe of the liver (segment 4b). Within this liver lesion, a hyperdense FB was observed [Figure 1].

Due to the FB present within the abscess, conservative treatment was not an option, and after appropriate patient preparation, the patient was offered a diagnostic laparoscopy with incision and drainage of the hepatic abscess and retrieval of the FB. Surgical exploration revealed adhesion of the prepyloric area of the stomach and duodenum to the left lobe of the liver. Careful dissection of the area revealed an abscess protruding from the left lobe of the liver, just below the falciform ligament.

The abscess was incised and drained, using cautery and blunt dissection, and after careful dissection, a fishbone protruding from the abscess itself [Figure 2a and b] was revealed. The fishbone was retrieved and the abscess was drained. A close suction drain was left within the abscess and in the vicinity of the stomach that was buttressed with an omental patch.

Post-operative care included nothing per os, wide-spectrum antibiotics including ceftiraxone and metronidazole and proton pump inhibitors with good response to therapy.

The patients resumed oral intake within the 2nd post-operative day and was discharged home on post-operative day 3. The close suction drain emitted small amount of serous discharge and therefore was taken out before discharge.

On follow-up, the patient recovered well with no sequelae.

DISCUSSION

Most ingested FBs pass through the gastrointestinal tract uneventfully within a week. The reported incidence of FBs penetrating the gastrointestinal (GI) tract is <1%. The authors reported previously of a trans-colonic FB penetration to the retrohepatic vena cava in a mentally impaired patient.[5]

Hepatic abscess due to perforation of the GI tract (ingestion) or transcutaneous FB is uncommon.[1] The majority of the ingested hepatic FBs are in fact needles or other long and sharp objects mainly chicken bones or toothpicks.

The use of laparoscopy in emergency settings was discussed vastly in the literature and its application depends mostly on the surgeon’s experience; in this patient, laparoscopy proved to be feasible and safe.

In conclusion, hepatic FB from an ingested source is uncommon. They can present with sub-acute or vague symptoms lasting weeks to months as a hepatic abscess. Removal of the FB is warranted for successful recovery of the hepatic abscess, and in selected patients, this can also be performed laparoscopically.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will
not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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