

# **GASTRIC PERFORATION AND FORMATION OF LIVER ABSCESS SECONDARY TO FISHBONE INGESTION: A CASE REPORT**

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**Abstract:** Liver abscess due to ingestion of a foreign body is an extremely rare complication, with an incidence of less than 1% of cases. Imaging tests - especially contrast-enhanced computed tomography - are extremely important to aid in early diagnosis. Thus, this work consists of a case report that identified, through computed tomography, the presence of a foreign body compatible with a fishbone that caused gastric perforation and secondary liver abscess.

**Keywords:** Fishbone. Computed tomography. Liver abscess. Gastric perforation.

## INTRODUCTION

Liver abscess due to ingestion of a foreign body is an extremely rare complication, with an incidence of less than 1% of cases. This is because most ingested foreign bodies are able to pass through the gastrointestinal tract and be eliminated without further repercussions.<sup>1</sup> The foreign body can be a fishbone (responsible for 84% of cases), chicken bones, needles, toothpicks, pens or dental plaques.<sup>2</sup>

The diagnosis is challenging and, therefore, often late, being related to a high mortality, due to the difficulty in the diagnostic suspicion and non-specificity of the symptoms, as these are similar to several abdominal conditions, such as cholecystitis and acute appendicitis.<sup>2</sup>

Thus, imaging tests - especially contrast-enhanced computed tomography - are extremely important to aid in early diagnosis.<sup>3</sup>

## DESCRIPTION

On June 1, 2020, ARS, 51 years old, male, married, farmer, resident of the city of Juína, Mato Grosso. Diabetic and controlled hypertension. He sought care at the doctor's office Dr. Rodrigo Santin Rodrigues, due to abdominal pain for 4 days in the epigastrium and right hypochondrium without irradiation, of strong intensity, sudden, without worsening or improving factors, associated with episodes

of nausea, vomiting and high fever.

On physical examination, he was in good general condition, lucid, oriented in time and space, acyanotic, anicteric, afebrile, normocolored, normocardic (100 bpm), eupneic (20 bpm) and normotensive (125x83 mmHg). Globular abdomen, RHA present, wall stiffness and painful on palpation of the epigastrium and right hypochondrium. Positive Murphy's sign, which made the main diagnostic hypothesis to be acute cholecystitis. Laboratory tests revealed leukocytosis (19,450/mm<sup>3</sup>), 10% of which were rods and high C-reactive protein (28.8 mg/L). Antibiotic therapy was started.

The following day, computed tomography (CT) of the abdomen with intravenous contrast was performed (Figure 1), whose report described: extraluminal dense juxta-gastric elongated image, with intense densification of the peritoneal fat and associated liver injury. The possibility of a foreign body with gastric perforation and secondary liver abscess must be considered.

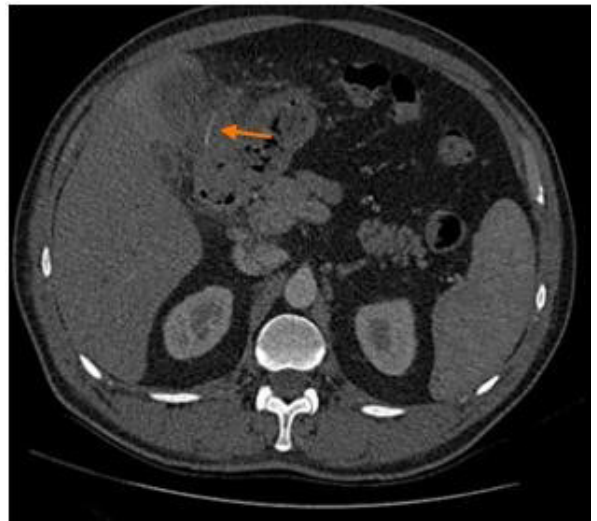


Figure 1 – Computed tomography of the abdomen, axial section, in arterial phase, showing a foreign body

Source: Archive of the Department of Radiology and Diagnostic Imaging Prevenia.

Exploratory laparotomy was performed through xiphumbilical access, revealing hepatic blockage of the duodenum and colon at a hepatic angle. Upon undoing the block, the presence of a liver abscess in the left lobe (segment IV) was observed, with the presence of a white pointed foreign body (fishbone). Resection of the IV hepatic segment was performed, cleaning of the region with drainage by a tubulolaminar drain of the hepatic bed and suture of the gastric perforation in the lesser curvature of the stomach. A friable area of the duodenum was also observed, in which a test with methylene blue was performed by nasogastric tube without liquid exit through the. There was a good postoperative evolution, without complications.

## DISCUSSION

In 1898, a liver abscess generated by perforation of the gastrointestinal tract was described for the first time, something extremely rare. The penetration site cannot always be identified, but the region of the gastric lesser curvature, in addition to the duodenum, is the site where these perforations occur most, due to its angulation.<sup>3</sup> A possible complication is the involvement of the left lobe of the liver, leading to the formation of a liver abscess, as occurred in the present case, which must increase the diagnostic suspicion.<sup>4</sup>

Diagnosis is difficult because patients are often unaware of fishbone ingestion and because of the varied and nonspecific symptoms, such as chills, fatigue, anorexia, vomiting, and weight loss.<sup>2</sup>

However, there may be a classic clinical presentation of a liver abscess, including fever, abdominal pain, and jaundice, but this is infrequent. Laboratory tests are rarely normal and have leukocytosis in about 80% of cases. Pyogenic abscesses are usually polymicrobial, the main microorganism being *E. coli*.<sup>4</sup> Imaging tests are of great

diagnostic aid, especially contrast-enhanced CT. This exam allows the precise delimitation of the abscess extension and the identification of the foreign body.<sup>3</sup> The fishbone, more specifically, can be easily visualized, since it is radiopaque, due to the presence of calcium in its composition. However, foreign bodies are often wrongly interpreted as “artifacts”.<sup>4</sup>

The treatment chosen was exploratory laparotomy plus antimicrobial therapy. In selected cases, percutaneous or endoscopic drainage of the abscess with endoscopic removal of the foreign body can be performed. The postoperative course is generally satisfactory and uneventful.<sup>2</sup>

In the differential diagnosis of acute perforated abdomen, despite its rarity, injuries resulting from perforations by foreign bodies and the possibility of formation of a left lobe hepatic abscess must be remembered, as occurred in the above case.<sup>4</sup>

## CONCLUSION

Although the symptomatological findings are nonspecific in most cases, when properly performed, the diagnostic investigation with complementary imaging tests in properly selected patients and with a suggestive clinical history, contrast-enhanced computed tomography is capable of obtaining satisfactory and effective results with regard to early diagnosis and better prognosis.

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