



Parietal mass caused by a fish bone: case report

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Introduction: It is a great challenge to distinguish the parietal inflammation, centered on the foreign body that pierced the digestive tract and remained in the wall before surgery, because of its atypical clinical nature. Ingestion of foreign bodies is not uncommon. Fish bones are particularly notorious culprits; however, most will pass through the gastrointestinal tract uneventfully.

Patients and Methods: The authors report a case of a patient who presented with periumbilical abdominal pain and a computed tomography (CT) scan that revealed the presence of periumbilical fat infiltration on a foreign body admitted on the Department of Digestive Cancer Surgery and Liver Transplantation, Casablanca, Morocco. An exploratory laparotomy revealed a parietal mass centered by a fish bone.

Results: Accidental ingestion of foreign bodies is common in clinical practice. However, perforation of the intestine by a foreign body is less common because the majority of foreign bodies pass without incident into the feces and only 1% of them (the sharpest and most elongated objects) will perforate the gastrointestinal tract, usually at the level of the ileum. CT, especially multidetector CT, is considered the method of choice for preoperative diagnoses of ingested foreign bodies and their complications due to its high-quality multiplanar capabilities and high resolution. Foreign body ingestion usually goes unnoticed, but the complications of this incident can be severe.

Conclusion: This case report highlights the fact that intestinal perforation caused by an ingested foreign body is a difficult diagnosis that should always be suspected in an attack of abdominal pain. Frequently, the clinical diagnosis is difficult, and recourse to imaging is sometimes necessary. Most of the time, the treatment is only surgical.

Keywords: fish bone, foreign body, parietal mass, perforation of the intestine

Introduction

It is a great challenge to distinguish the parietal inflammation, centered on the foreign body that pierced the digestive tract and remained in the wall before surgery, because of its atypical clinical nature^[1].

Ingestion of foreign bodies is not uncommon. Fish bones are particularly notorious culprits; however, most will pass through the gastrointestinal tract uneventfully^[2].

Computed tomography (CT) is considered the method of choice for diagnosing ingested foreign bodies and their complications due to its high-quality multiplanar capabilities and high resolution^[3].

HIGHLIGHTS

- Accidental ingestion of foreign bodies is common in clinical practice.
- Perforation of the intestine by a foreign body is less serious because the majority of foreign bodies pass without incident into the feces and only 1% of them do so.
- Foreign body ingestion usually goes unnoticed, but the complications of this incident can be severe.
- Computed tomography is considered the method of choice for preoperative diagnoses of ingested foreign bodies and their complications due to its high-quality multiplanar capabilities and high resolution.

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Here, in order to summarize the characteristics of inflammatory wall mass caused by a foreign body and awaken clinicians' attention to this type of case, we have described such a rare case with a review of the literature.

Patients and methods

A 46-year-old overweight woman without previous pathological history. She presented with periumbilical abdominal pain that had been evolving for 9 months without vomiting or transit disorders, or externalized digestive hemorrhage, all of which was evolving in a context of apyrexia and conservation of the general state. The clinical examination found a hard and mobile subumbilical mass without hepatomegaly or splenomegaly. The rest of the somatic examination was unremarkable.

An abdominal CT scan showed a significant infiltration of the periumbilical fat measuring 15 × 5 cm and extending over 8 cm



Figure 1. Computed tomography image of a subumbilical mass centered by a linear foreign body.

with evidence of a linear, dense structure measuring 13 mm in length, located within it and related to a foreign body (Fig. 1). The infectious analysis was negative, as were the tumor markers.

A laparotomy revealed a subumbilical parietal mass measuring 15 cm. The mass was examined with the surgeon's finger and was found to contain a sharp, linear foreign body (a fish bone) measuring 1 cm in length (Fig. 2). The mass was located in the anterior abdominal wall.

A pathological analysis confirmed the presence of a granulomatous infiltrate surrounding the foreign body.

The postoperative period was simple and without complications. The patient was discharged after the resumption of the transit.

Patient follow-up was every 15 days with a complete clinical examination and primary care of the surgical wound, with instructions to change the dressing every 2 days, take antibiotics, anticoagulants, and analgics for 15 days, and avoid carrying heavy loads until complete healing.

The postoperative follow-up was simple, and the patient was declared discharged on day 6 postoperatively.

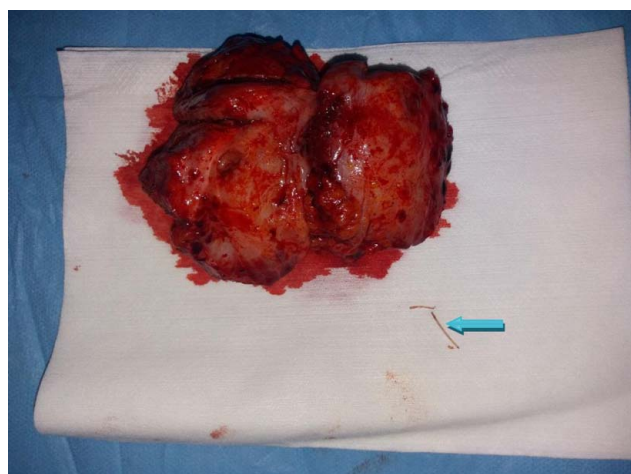


Figure 2. The parietal mass after resection with the fish bone.

The surgical procedure was performed on a scheduled date with a correct preanesthetic assessment. The procedure was performed by an associate professor of higher education in general surgery and two residents in the same specialty.

The operation was performed in the operating room of the Department of Digestive Cancer Surgery and Liver Transplantation, A3 CHU IBN ROCHD, Casablanca, Morocco.

The patient was satisfied with the intervention and the improvement in his health in the short and long term.

The work has been reported in line with the SCARE 2020 criteria^[4].

Discussion

Perforation of the gastrointestinal tract due to fish bone ingestion is rare; less than 1% of patients with foreign body ingestion develop perforation; however, this number encompasses all ingested foreign bodies and is not fish bone specific^[3,5].

Accidentally ingested fish bones are the most common foreign body to cause perforation of the gastrointestinal tract because of their sharp, elongated ends. Perforation can occur anywhere in the gastrointestinal tract but usually occurs at areas of angulation or narrow lumen, such as the distal ileum^[5].

Complications of fish bone perforation include intra-abdominal abscess formation, including hepatic and intraperitoneal abscesses, colorectal, colovesical, and enterovascular fistulas, inflammatory masses, and omental pseudotumors.

Fish bone ingestion is particularly common in cultures where eating a whole fish is considered a delicacy or when a large amount of fish is consumed at a particular time for religious reasons^[5]. Other risk factors leading to accidental ingestion include advanced age, increased intestinal fragility due to inflammatory disease, and wearing dentures.

The preoperative diagnosis of a foreign body is clinically challenging because ingestion is usually accidental and the patient may not remember actually ingesting the foreign body as it occurred a fortnight prior to the development of any symptoms. In addition, the clinical presentation is usually not specific^[6,7].

Perforation and migration from the digestive tract of a foreign body are the causes of some liver abscesses^[7].

Early diagnosis and retrieval of a foreign body involved in gastrointestinal tract perforation are critical for avoiding morbidity and mortality. Note that there can be a considerable time span of months or even years between the incident of ingestion and the appearance of symptoms of an inflammatory mass or abscess. If the correct diagnosis of foreign body perforation is not made timely, percutaneous interventional drainage of the abscess could result in recurrence or persistence of the abscess even life-threatening sepsis. So that in refractory abscesses after interventional drainage and application of antibiotics, foreign body migration must be considered as potential pathogenesis, despite its rarity. Clinicians should also be aware of possible ingestion of foreign bodies in elderly individuals wearing dental prosthetic devices^[8].

Standard radiography of fish bones has a low sensitivity of 32% that varies by species, in contrast to the higher sensitivity of chicken bones due to their higher density. Even when fish bones are sufficiently radiopaque to visualize on radiographs, large soft tissues, masses, and fluid can obscure the minimal calcium content of the bone, especially in altered or obese patients^[1].

CT scanning has also proven its benefit in diagnosis, where a linear calcified lesion is very frequently demonstrated with a sensitivity of 71.4%, increasing to 100%^[9].

A CT scan is also reported to be accurate only in describing the complications; the etiology or nature of the Fish bone is not normally discernible on a CT scan.

In the case of foreign body ingestion, ~10–20% will require endoscopy and other nonsurgical means of intervention, and 1% or less will require surgical intervention^[8].

Frequently, there is no extraluminal migration, and the foreign body could be removed endoscopically. When this foreign body has migrated out of the digestive tract, surgical extraction by a minimally invasive approach is safe and feasible^[7].

Conclusion

This case report highlights the fact that intestinal perforation caused by an ingested foreign body is a difficult diagnosis that should always be suspected in an attack of abdominal pain. Frequently, the clinical diagnosis is difficult, and recourse to imaging is sometimes necessary. Most of the time, the treatment is only surgical.

Ethical approval

As per international standard written ethical approval has been collected and preserved by the author(s).

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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None.

Authors' contributions

D.E.: writing the paper and operating surgeon. K.K.: corresponding author writing the paper and operating surgeon. E.Y.: writing the paper and operating surgeon. A.H., R.B., and S.R.E.J.

F.C.: correction of the paper. This work was carried out in collaboration among all authors. All authors contributed to the conduct of this work. They also declare that they have read and approved the final version of the manuscript.

Conflicts of interest disclosure

The authors declare having no conflicts of interest for this article.

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