Case Report

Intestinal Perforation by an Ingested Bone Fragment: A Case Report

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ABSTRACT

Introduction: The ingestion of a foreign body is most often accidental. The main complication is intestinal perforation. We report a case of intestinal perforation by ingestion of a bone fragment.

Case Report: It was a 45-year-old man, who was received for abdominal pain of second right flank and vomiting. Physical examination found abdominal tenderness predominant in the right lower quadrant. The CT scan showed fluid peritoneal effusion with pneumoperitoneum with a bone fragment in the lumen of the distal ileum. An intestinal resection removing the perforation followed by an end to end anastomosis was performed. An abdominal drainage was associated.

Discussion

The foreign bodies most involved in intestinal perforations are fish bones in 63% followed by bone fragments in 17% [1]. This is explained by the sharpness of these types of foreign bodies as in our case report [4]. Some risk factors are oftenly found, such as psychiatric disorders, alcoholism, extreme ages or use of dental prosthesis [5]. No particular factor was found in our patient. Perforation can sit on the entire digestive tract. However, the preferential localization is angulation areas zones with smaller diameter such as the ileocecal valve, the recto-sigmoid junction or the terminal intestine as in our observation [6]. The existence of surgical history on the digestive tract or preexisting pathologies like diverticula or intestinal malformations can also promote the occurrence of complications [5]. In our patient, these contributing factors were not found.
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Figure 1: CT scan with intra digestive hyperdense foreign body (arrow) with pneumoperitoneum (star).

Figure 2: Per operative image showing the intestinal perforation.

Figure 3: Image showing the foreign body (sharp bone fragment).

Bowel perforation can have multiple clinical presentations. Localized or generalized peritonitis is the most frequent presentation. However, the constitution of a local intra-abdominal or parietal abscess is possible [7]. The diagnosis is based essentially on the CT scan which has a sensitivity of 100% [8]. It gives the localization and look for signs of intestinal perforation as in our case [9]. The treatment of intestinal perforation by a foreign body is surgical. The principle of the treatment is based on the extraction of the foreign body and restoring digestive continuity. The classic approach is laparotomy, but laparoscopy is possible when patients are seen early [10]. For the perforation, performing a simple suture, a resection with end to end anastomosis or stoma depends on the localization and the clinical presentation [2]. In our case, we opted for resection followed by anastomosis because of localization at the distal ileum and the localized peritonitis.

Conclusion

Intestinal perforation is a serious complication of ingested foreign bodies. Preoperative diagnosis, although difficult, is improved by CT scan. The surgical technique depends on the type of foreign body, the localization, and the diagnostic delay.

REFERENCES

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