A Toothpick a day, keeps the doctor away?

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Abstract

A Toothpick is a dreaded offender when ingested, as it is risky to cause impaction, obstruction or perforation of the gut. When ingestion of a toothpick leads to one of these complications, it clinically mimics an acute abdomen. Often the patient doesn't recall the ingestion, leading to misdiagnosis as inflammatory bowel disease, appendicitis/diverticulitis, etc. We describe the case of a 50-year old woman presenting to the emergency department with right lower abdominal pain. CT-scan showed an obstruction without clear underlying cause. The hypothesis of obstruction due to intestinal adhesions without strangulation was assumed and non-operative management lead to recovery and dismissal of the patient. However, she presented 3 weeks later with identical complaints, this time showing a terminal ileitis on CT-scan. Surprisingly, a toothpick perforating the terminal ileum was found during endoscopy and could by removed. A clinician should think of foreign body ingestion when patients present with an acute abdomen with no clear underlying pathology. (Acta gastroenterol. belg., **2019**, 82, **97-98**).

Key words : Toothpick, acute abdomen, endoscopy.

Introduction

Accidental ingestion of a foreign body is a frequent presentation in the emergency department. In most cases an early diagnosis is established and either spontaneous evacuation through the gastrointestinal tract or removal by endoscopy occurs. However, in < 1% complications occur such as perforation or inflammation, requiring surgery. (1,2) The aim of this case report is to increase awareness for foreign body ingestion when patients present with gastro-intestinal obstruction or inflammation without any clear underlying pathology (for example: inflammatory bowel disease, gastro-intestinal tract tumor, diverticulitis, etc.).

Case

A 50-year old woman, with a medical history of appendectomy and umbilical hernia repair presented to the emergency department with acute onset of abdominal pain, irradiating to the right lower quadrant and associated with nausea and anorexia. She stated that the pain worsened with movement and change of position. The patient denied alcohol and nicotine abuse or any family history of disease. The abdominal examination revealed right lower quadrant abdominal pain, tender to palpation, and with the presence of rebound tenderness. There was no distention of the abdomen.

Fig. 1.

Laboratory analyses revealed leukocytosis with a white blood cell (WBC) count of 17 000/µl and a discrete increase in C-Reactive Protein (CRP) (10 mg/L). Computed tomography (CT) was performed and showed an obstruction of the small intestine, without a clear cause of the obstruction (Fig.1). The hypothesis of an obstruction due to intestinal adhesions without strangulation was assumed.

The case was discussed with the colleagues of the department of abdominal surgery. Since she was stable without any increase in lactate, perforation or ischemia of the bowl seemed unlikely and she was transferred to the department of gastro-enterology for nonoperative management (intravenous fluid therapy and electrolyte replacement, proton pump inhibition and a nasogastric tube).

The initial evolution showed an increase of the inflammatory level (CRP increased to 100 mg/L), in absence of fever. Watchful waiting was applied towards

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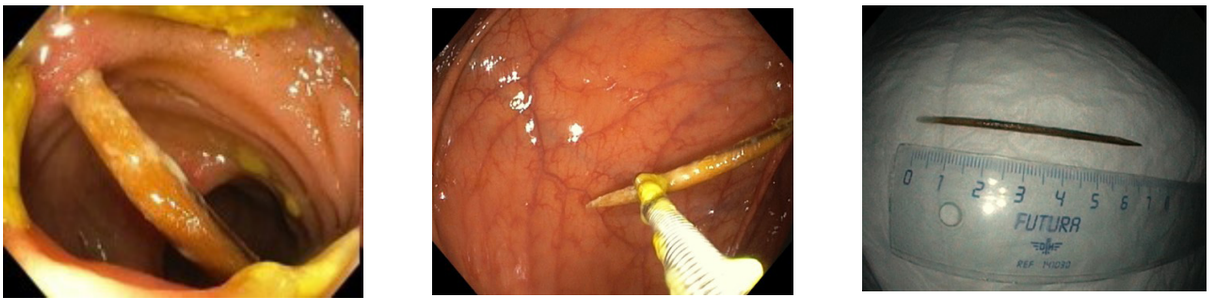

Fig. 2.

antibiotics. After 3 days, the nasogastric tube could be removed as flatus and defecation occurred. Considering the favorable biochemical evolution, the patient was dismissed after 5 days of hospitalization with normal transit and absence of pain. A colonoscopy was planned 6 weeks after dismissal.

However, she presented again to the emergency department three weeks later with acute pain in the right lower quadrant. Again, the clinical examination showed a severely tender right fossa iliaca with rebound tenderness. Laboratory analyses showed a WBC count of 14 000/µl and discrete increased CRP (15 mg/L). A new CT was performed and revealed terminal ileitis, without complications. The patient was admitted and intravenous beta-lactam/beta-lactamase inhibitor antibiotics were started with rapid improvement of clinical symptoms.

Two days after admission a colonoscopy was performed; upon introduction in the terminal ileum a foreign object was found, fixed longitudinally through the mucosa. The rest of the terminal ileum was perfectly normal. Upon further inspection, the object appeared to be a wooden toothpick perforating the terminal ileum on both sides. Using a forceps, we could gently grip and remove the toothpick from the ileum and from the patient (Fig. 2).

The patient couldn't remember having swallowed a toothpick but admitted that she habitually chewed on toothpicks. The patient evolved well under antibiotics and conservative measures. She could be dismissed 2 days after removing the toothpick from the intestine.

Discussion

An involuntary ingestion concerns most of the time dietary foreign bodies (bone fragments for example) or toothpicks, both risky for perforation due to their sharp and pointed ends. (3,2,1) 80% or more of the foreign bodies will pass through the gastrointestinal tract without any complication or need for intervention. (4,5) In 10-20% of foreign body ingestion, endoscopic removal is required. Only < 1% needs surgical removal. (3)

The terminal ileum is the most common site of perforation or obstruction by a foreign body in a normal intestine, due to the narrow ileocecal valve. (2,6)As the symptoms often mimic a terminal ileitis due to Crohn's disease or a perforated appendicitis, the correct clinical diagnosis is difficult to make without a clear history of foreign body ingestion. In addition, these types of foreign bodies only have a small degree of radiopacity on plain radiography and even CT scans have their limits regarding detection of small foreign bodies. (2,4)

In this case the patient was lucky that the toothpick remained in place in the terminal ileum. Several cases have been reported on foreign bodies migrating into the peritoneal cavity or even into adjacent organs causing for example liver abscesses or fistulas and other more severe complications. (7,8)

Conclusion

A foreign body ingestion is a common clinical problem. It must be considered in the differential diagnosis in patients presenting with unexplained acute abdomen, even when the patient does not recall any foreign body ingestion.

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