Toothpick ingestion causing rectum perforation

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Dear Editor,

A 37-year-old male patient with abdominal pain that started 3 days ago and that continued to worsen was admitted to the emergency room. There was no history of abdominal operation or chronic disease. Physical examination revealed abdominal tenderness and muscular defense, particularly in the bilateral lower quadrants. Digital rectal examination revealed an empty rectum. Laboratory parameters were insignificant except for leukocytosis (11000/mm3). Chest X-ray revealed free air in the right subdiaphragmatic space (Figure 1). The patient underwent laparotomy for a diagnosis of perforation. A wooden toothpick had perforated the rectum in three different sites and was stuck in the mesentery of the upper rectum. One of the perforation sites was located in the rectosigmoid junction, whereas two were in the upper rectum (Figure 2). The toothpick was removed. Primary suturation was attempted to repair the perforated sites, but it failed because of inflammation and edema of the rectal wall. Therefore, diverting sigmoid loop colostomy was selected as the final method owing to local inflammation and fecal peritonitis. Enteral nutrition was initiated on postoperative day 1 and was well tolerated. The patient was discharged on postoperative day 5 after an eventful recovery. Eight weeks after urgent surgery, control rectosigmoidoscopy showed recovery of the perforation sites, and loop colostomy was closed under elective conditions. The patient remained well during the 2-year follow-up period.

Accidentally or intentionally ingested foreign bodies (FBs) mostly pass through the intestinal tract without causing any harm. However, as the sharpness of the swallowed objects increases, the risk for complications increases. Many complications such as obstruction, perforation, fistula, and bleeding have been reported in the literature (1). Acute angulation and physiological stenosis in the gastrointestinal tract increase the risk for FB perforation. Therefore, the duodenum, cecum, and rectosigmoid junction are frequent sites of perforation owing to ingested FBs (2).

Toothpicks constitute 9% of ingested FBs (3). The most common symptom is abdominal pain (4). Male sex, toothpick chewing, and alcohol consumption are risk factors for these cases (5). Many patients do not realize that they have ingested a toothpick while consuming foods such as canape and sandwich; also even if they are aware of it, they do not explain their history of ingestion. However, in patients in whom perforation is detected using imaging methods and who do not have any risk factors, probability of FB ingestion should be specifically questioned in anamnesis. Hence, when we questioned our patient after operation, he remembered that he had ingested a toothpick 8 days ago.

Toothpicks can be rarely detected on radiologic screening because they are radiolucent (4). When no signs of perforation are observed, endoscopy should be the first choice in cases in whom FB not passed through Treitz ligament in imaging methods (5). However, because of the inadequacy of imaging methods and the imitation of many other pathologies, diagnosis may be delayed. Delay in diagnosis increases the mortality rates by up to 18% (2).

Perforations of the gastrointestinal system owing to ingested FBs are rare but challenging cases for surgeons. In particular, objects such as toothpicks, which are widely used in daily life, play a role in etiology and make diagnosis difficult. Cases in which perforation is detected using imaging methods, FB ingestion should be considered.

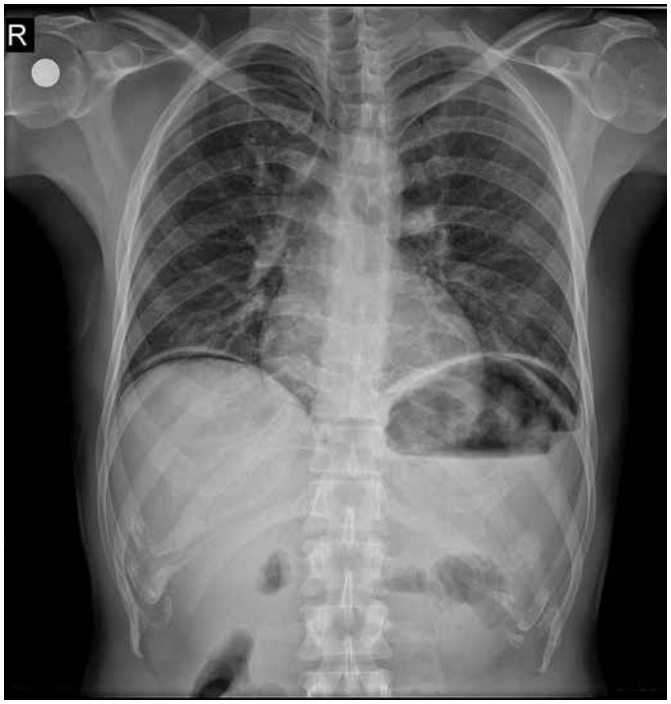

Figure 1. Chest X-ray showing right subdiaphragmatic free air

Informed Consent: Written informed consent was obtained from the patient who participated in this study.

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Emir Çapkınoğlu, Oğuzhan Özsay, Atilla Örsel, Serkan Karaisli

Department of General Surgery, İzmir Katip Çelebi University Atatürk Training and Research Hospital, İzmir, Turkey

ORCID ID: Serkan Karaisli: 0000-0001-8876-0191

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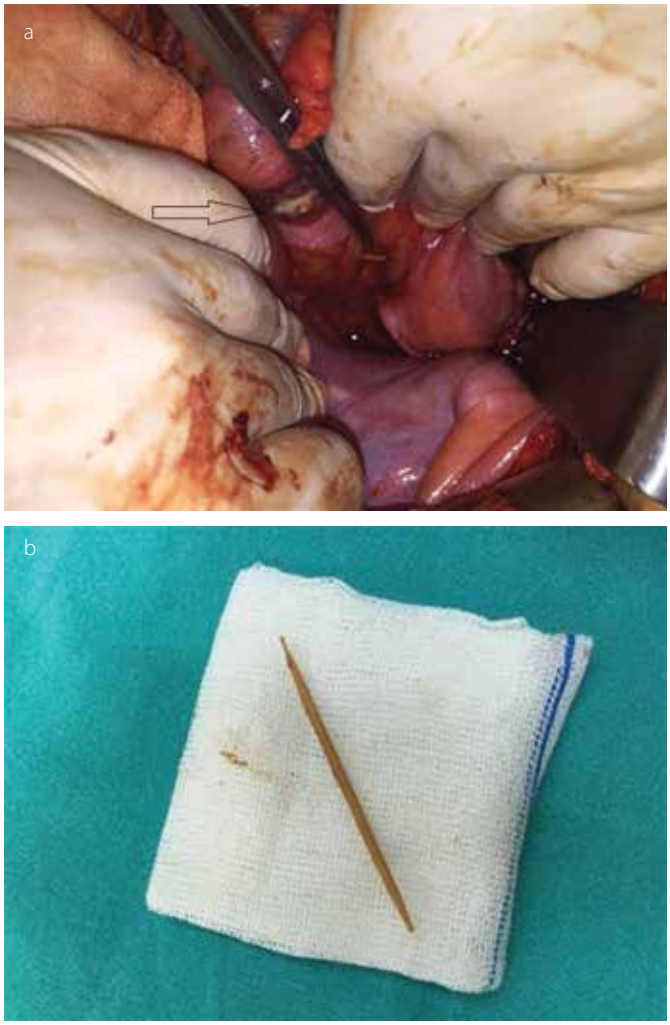

Figure 2. a,b. (a) Toothpick stuck in the mesentery of the upper rectum, and the perforation site is located in the rectosigmoid junction (arrow), (b) the toothpick that was removed

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Address for Correspondence: Serkan Karaisli
E-mail: skaraisli@hotmail.com
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