

A novel clip-assisted method for endoscopic removal of an impacted toothpick from the colon



Fig. 1 A 14-year-old boy presented with pain in the right iliac fossa and hypogastrum, nausea, headache, and fever, and had experienced an episode of diarrhea. Abdominal computed tomography (CT) showed a foreign body in the sigmoid, associated with fat stranding and presence of pneumoperitoneum.



Fig. 2 Colonoscopy showed a toothpick piercing the wall of the sigmoid colon.

Perforated acute abdomen is a common syndrome among nontraumatic abdominal emergencies [1]. Bowel perforations may occur because of inflammatory, neoplastic, traumatic, or infectious processes in the digestive tract [2]. They can also be due to ingestion of foreign bodies or as a result of diagnostic and therapeutic medical procedures [2]. The bowel perforation

can present as diffuse peritonitis, when it occurs in free peritoneum, or as an obstructive process [3].

Bowel perforation is unusual after foreign body ingestion. However, it can occur when the object is long and pointed, in areas of physiological or pathological narrowing [4]. We describe a case of bowel perforation in the sigmoid colon that was

caused by a foreign body, namely a toothpick, and treated endoscopically.

A 14-year-old boy presented with abdominal pain in the right iliac fossa and hypogastrum, nausea, and headache. He was feverish and had experienced an episode of diarrhea. Laboratory tests showed leukocytosis and elevation of C-reactive protein. Inconclusive radiological evaluation with abdominal ultrasound showed inflammatory changes of mesenteric fat in the right iliac fossa and hypogastrum. Abdominal computed tomography showed a thickening of the wall of the sigmoid colon, about 23 cm from the anal margin, fat stranding, and an extraluminal air bubble. The cecal appendix was unchanged. Completion of the examination using rectal contrast showed an image suggestive of a foreign body causing perforation of the colon (● Fig. 1).

An endoscopic examination was done, with bowel preparation using only 1000 mL of glycerin enema administered rectally. A toothpick was seen to be piercing the wall of the sigmoid colon (● Fig. 2). The available tools did not allow us to grasp the toothpick in such a way that we could free it from the sigmoid wall. We therefore attached a metal clip (HX 610-135, disposable endoscopic; Olympus Medical, Japan) to the toothpick; a polypectomy snare (Captivator, small oval, stiff, 13 mm; Boston Scientific, Costa Rica) was closed around the clip. We then used traction and countertraction movements, to remove the toothpick from the colonic wall (● Fig. 3).

The patient progressed satisfactorily, without complications and was discharged after 48 hours. He was ingesting a bland diet, had normal bowel movements, and was taking oral antibiotics. He had no complaints at outpatient 15-day follow-up and was discharged to return to normal daily activities.

Endoscopy_UCTN_Code_TTT_1AQ_2AH

Competing interests: None

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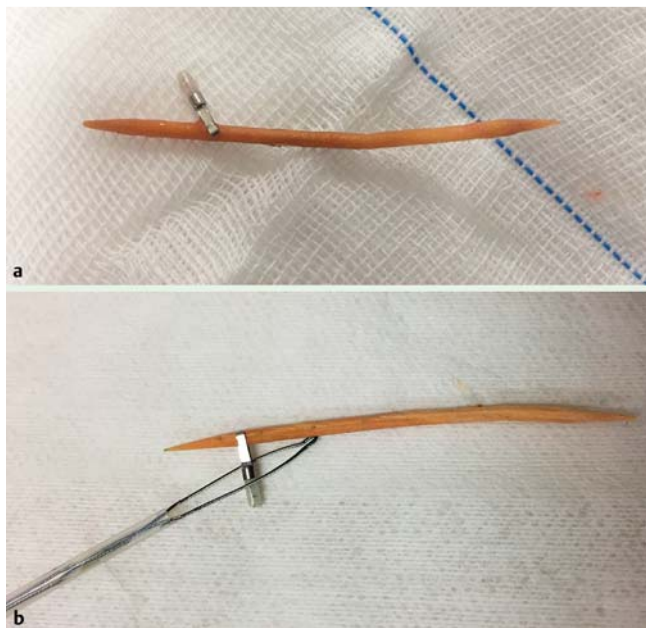


Fig. 3 **a** Clip grasping the removed toothpick. **b** Traction had been obtained by using the polypectomy snare closed around the clip.

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DOI <http://dx.doi.org/10.1055/s-0042-110998>
Endoscopy 2016; 48: E259–E260
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

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