

Magnet-assisted endoscopic removal of ingested sewing needles from the stomach and descending duodenum

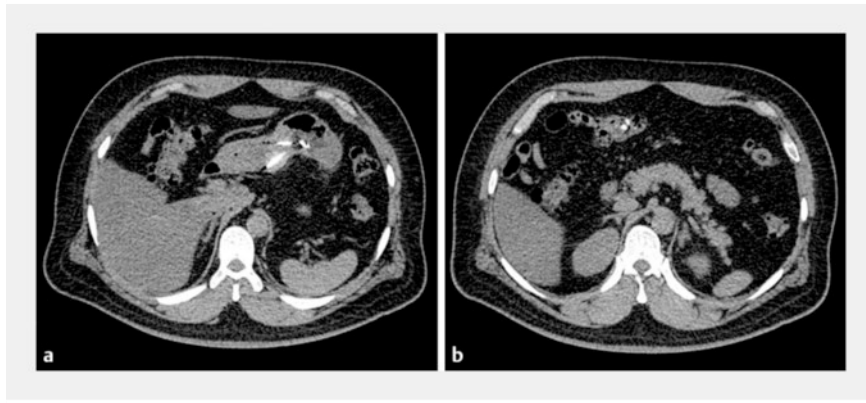
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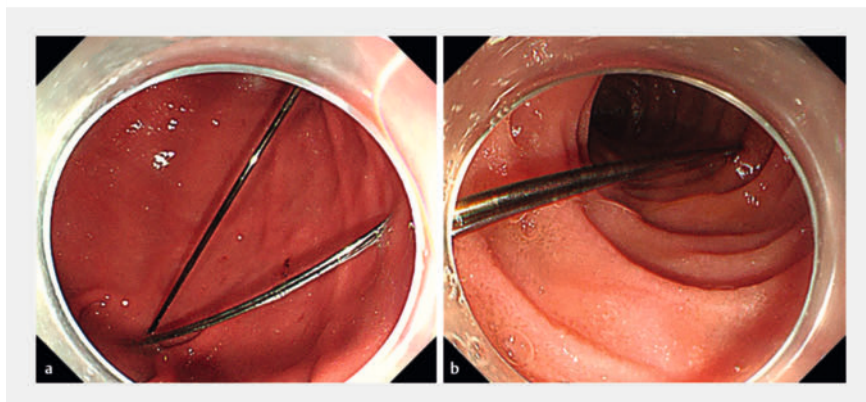
▶ **Video 1** Magnet-assisted endoscopic removal of ingested sewing needles from the stomach and descending duodenum.

A 42-year-old man presented to our emergency department with a history of having swallowed several sewing needles an hour previously. Physical examination showed mild hyperemia of the pharynx and slight abdominal tenderness. Cervical thoracoabdominal computed tomography detected several high density shadows in the stomach and duodenum, without any signs of perforation (▶ **Fig. 1**). Gastroscopy revealed the presence of three sharp-pointed sewing needles in the stomach and two in the descending duodenum (▶ **Fig. 2**). The lengths of the needles were approximately 3–4 cm. Neither foreign forceps nor snares were able to grasp the needles tightly owing to their uncontrollable slim shape.

Given that the needles are metal, a magnet grasped by forceps was subsequently used to retrieve them (▶ **Video 1**). The five sewing needles were held by the magnet throughout the removal process and successfully extracted (▶ **Fig. 3**). Mild mucosal injury was noted in the stomach and the descending duodenum, without evidence of significant bleeding, obvious perforation, or needle embed-

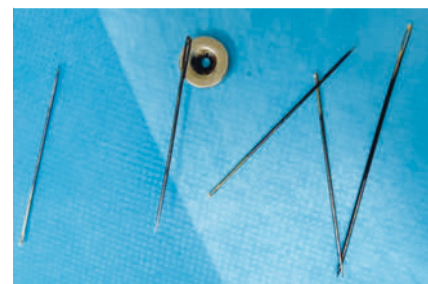


▶ **Fig. 1** Cervical thoracoabdominal computed tomography images showing several high density shadows: **a** in the stomach; **b** in the duodenum.



▶ **Fig. 2** Gastroscopic views showing: **a** three sewing needles in the stomach cavity; **b** two sewing needles in the descending duodenum.

ment. An abdominal radiograph was performed after the procedure, which confirmed no other needles were present. The patient reported no further discomfort, and was discharged the same day. The ingestion of sharp-pointed foreign bodies such as sewing needles is an urgent situation, with an increased risk of perforation. Commonly used retrieval devices for sharp-pointed foreign bodies are forceps or snares [1], but our failed attempts show that these are not efficient for sewing needles. We have previously reported on the wide applications of magnets in various endoscopic



▶ **Fig. 3** Photograph of the five sewing needles following their successful removal.

therapies [2,3,4,5], and this case demonstrates that magnets can be an alternative for endoscopic removal of sewing needles.

Endoscopy_UCTN_Code_TTT_1AO_2AL

Conflict of Interest

The authors declare that they have no conflict of interest.

Funding

Natural Science Foundation of Sichuan Province
<http://dx.doi.org/10.13039/501100018542>
2023NSFSC1622,2023NSFSC1901
National Natural Science Foundation of China
<http://dx.doi.org/10.13039/501100001809>
82102713
China Postdoctoral Science Foundation
<http://dx.doi.org/10.13039/501100002858>
2022M712265
Chengdu Science and Technology
2022-YF05-01263-SN

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References

- [1] Ikenberry S, Jue T, Anderson M et al. Management of ingested foreign bodies and food impactions. *Gastrointest Endosc* 2011; 73: 1–2 doi:10.1016/j.gie.2010.11.01021628009
- [2] Ye L, Yang Z, Du J et al. Endoscopic removal of two magnets impacted in the lower esophagus and gastric fundus. *Endoscopy* 2018; 50: E124–E125 doi:10.1055/s-0044-10170329466817
- [3] Ye L, Zeng H, Wang S et al. Magnet-assisted diverticuloplasty for treatment of Zenker's diverticulum. *Endoscopy* 2018; 50: E170–E171 doi:10.1055/a-0600-948329742776
- [4] Mou Y, He L, Hu B. Utility of external and internal magnets to facilitate bile duct cannulation by changing the position of the papilla. *Endoscopy* 2022; 54: E715–E716 doi:10.1055/a-1756-434935255521
- [5] He L, Qin X, Ye L et al. Endoscopic magnet-assisted gastrojejunostomy to treat symptoms caused by a deformed pylorus. *Endoscopy* 2022; 54: E546–E547 doi:10.1055/a-1682-681534781368

Bibliography

Endoscopy 2023; 55: E1242–E1243
DOI 10.1055/a-2210-0248
ISSN 0013-726X
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Georg Thieme Verlag KG, Rüdigerstraße 14,
70469 Stuttgart, Germany



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