

Upside-down stomach repositioned and fixed by colonoscopy-assisted percutaneous endoscopic gastrostomy

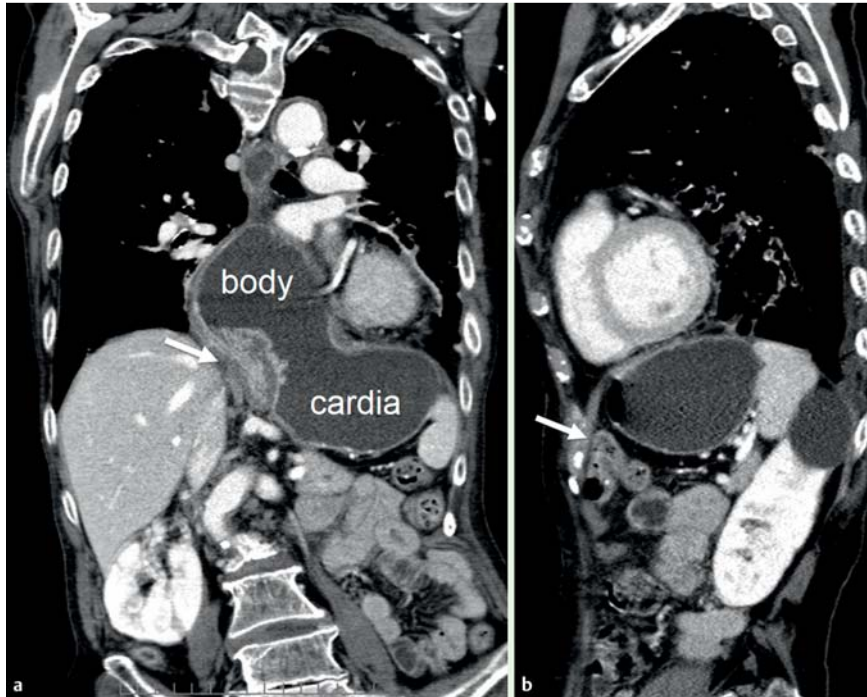


Fig. 1 **a** Abdominal computed tomography (CT) indicated migration of the body of the stomach into the mediastinum (coronal view). The cardia and the body of the stomach are shown. The arrow indicates the antrum of the stomach. **b** Part of the transverse colon was interposed between the anterior abdominal wall and the stomach (sagittal view). The arrow indicates the transverse colon.

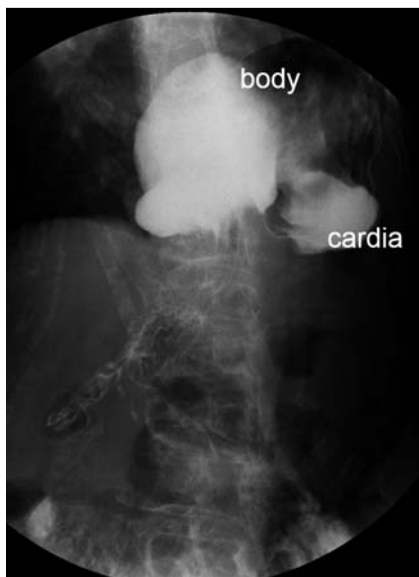


Fig. 2 Upper gastrointestinal series indicated subtotal herniation of the stomach into the mediastinum in an inverted position. The cardia and the body of the stomach are shown.

Upside-down stomach is a rare condition characterized by the occurrence of a gastric volvulus in a supradiaphragmatic hernia sac [1,2]. We describe a case of upside-down stomach with mesenteroaxial volvulus in which the stomach had prolapsed into the esophageal hiatal hernia sac. The gastric volvulus was successfully resolved by colonoscopy-assisted PEG. An 82-year-old woman presented with a 3-month history of intermittent vomiting after meals. Esophagogastroduodenoscopy indicated the presence of a severe deformity of the stomach. Abdominal computed tomography (CT) showed migration of the antrum and body of the stomach into the mediastinum (Fig. 1a). In addition, CT revealed that part of the transverse colon was interposed between the anterior abdominal wall and the stomach (Fig. 1b). Upper gastrointestinal series indicated subtotal herniation of the stomach into the mediastinum in an inverted

position (Fig. 2). Based on these findings, we diagnosed the patient with upside-down stomach with mesenteroaxial torsion. Although surgical repair is recommended in such cases, the patient in the present case was considered an unsuitable candidate for surgery. Percutaneous endoscopic gastrostomy (PEG) has been reported as an alternative to standard surgical therapy in symptomatic patients with upside-down stomach [2,3]. In the present case, however, because of the deviation of the transverse colon, the transverse colon might have interfered with the puncture route. Therefore, to avoid adverse events [4], a colonoscope was inserted under X-ray fluoroscopy, and the transverse colon was pulled from the upper abdomen toward the pelvis, as described previously (Fig. 3a, b) [5]. The displaced stomach was endoscopically repositioned and anchored to the abdominal wall by PEG (Fig. 3c). After the procedure, the patient's symptoms resolved. At 6-month follow-up, she was alive and well and free of symptoms.

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Competing interests: None

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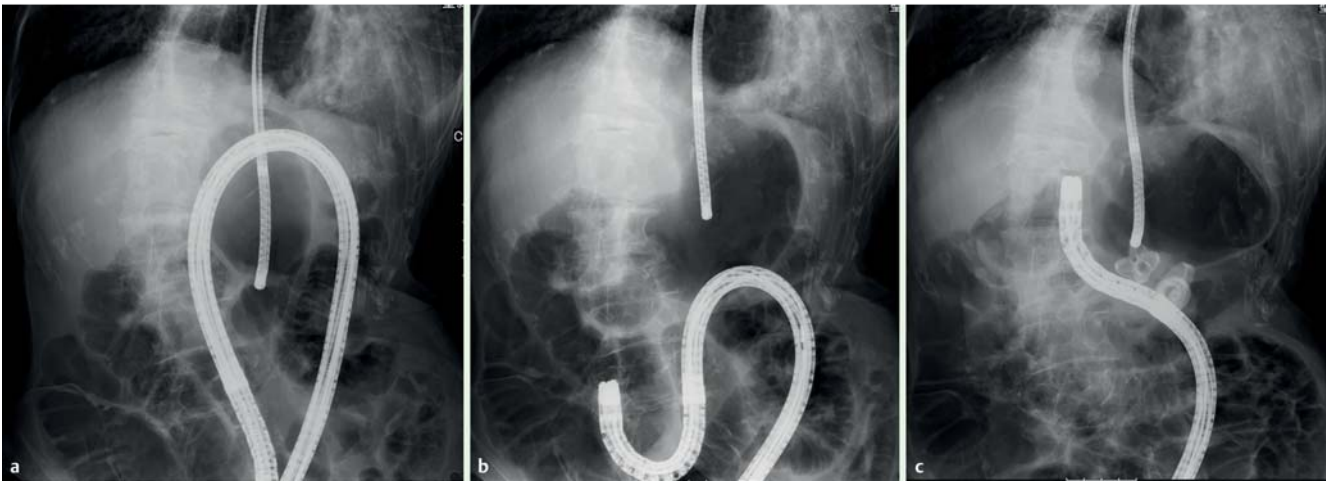


Fig. 3 **a** A fluoroscopy-assisted colonoscopy was performed, which showed that the transverse colon was present in the upper abdomen. **b** The transverse colon was pulled from the upper abdomen toward the pelvis by a twisting maneuver of the scope shaft. **c** The displaced stomach was endoscopically repositioned and anchored to the abdominal wall by percutaneous endoscopic gastrostomy.

5 Fukita Y, Katakura Y, Adachi S et al. Colonoscopy-assisted percutaneous endoscopic gastrostomy to avoid a gastrocolocutaneous fistula of the transverse colon. *Endoscopy* 2014; 46 (Suppl. 01): E60

Bibliography

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