A 44-year-old man with achalasia was scheduled to undergo peroral endoscopic myotomy for recurrence after Heller myotomy. Massive food residue was observed in the lower esophagus, despite repeated and adequate fasting (Fig. 1). Repeated irrigation and suction by the endoscope (GIF-Q260J; Olympus, Tokyo, Japan) failed to remove the food residue. Grasping forceps (basket type, FG-16L-1; Olympus) did not work either. Therefore, tube-assisted suction was performed (Video 1).

A soft, plastic tube (outer diameter 5 mm) with several side apertures was tied along the side of the scope. The head of the tube was positioned approximately 3 mm beyond the tip of the scope (Fig. 2). The other end of the tube was connected to a vacuum extractor. Then, the scope with the attached tube was inserted smoothly. When the food residue was observed, irrigating and suction were continued until no food residue remained. Eventually, a clear field was achieved (Fig. 3).

Patients who undergo endoscopy after gastric surgery usually have some food residue [1–3], similarly to patients with achalasia, which interferes with endoscopic observation and detection of lesions [2]. No specific method has been reported to remove massive food residue during gastroscopy. Patient preparation for the day before the endoscopic procedures is emphasized: sufficient fasting.

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**Fig. 1** Massive food residue in the lower esophagus despite sufficient fasting.

**Fig. 2** A soft, plastic tube was tied along the side of the scope.

**Fig. 3** A clear field, free from food residue, was achieved with the suction device.

**Video 1** Tube-assisted suction for the removal of massive food residue during gastroscopy.
time (more than 18 hours) [3] and a liquid diet plus gastrokinetic agents (i.e. cispamide, domperidone, and aclatome napadisilate) [2]. However, attempts to obtain a satisfactory field may still end in failure. Tube-assisted suction is a novel technique to solve this problem. The tube is a common vacuum suction tube that is available in most medical institutions. This technique minimizes discomfort resulted from repeated fasting. Furthermore, use of this simple addition may avoid a delay in emergency endoscopic treatment or having to postpone treatment.

In conclusion, we believe that tube-assisted suction is an effective, simple, and timesaving way for removing massive food residue.

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Competing interests
None

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