

## Gastric Mucosal Laceration due to Percutaneous Endoscopic Gastrostomy

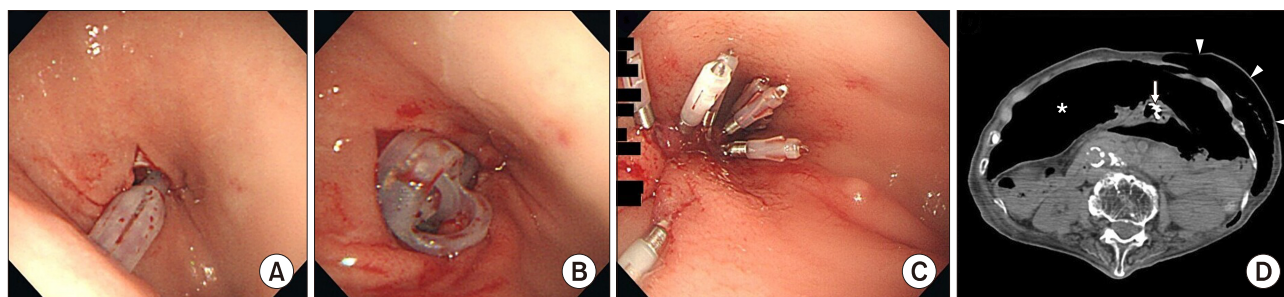
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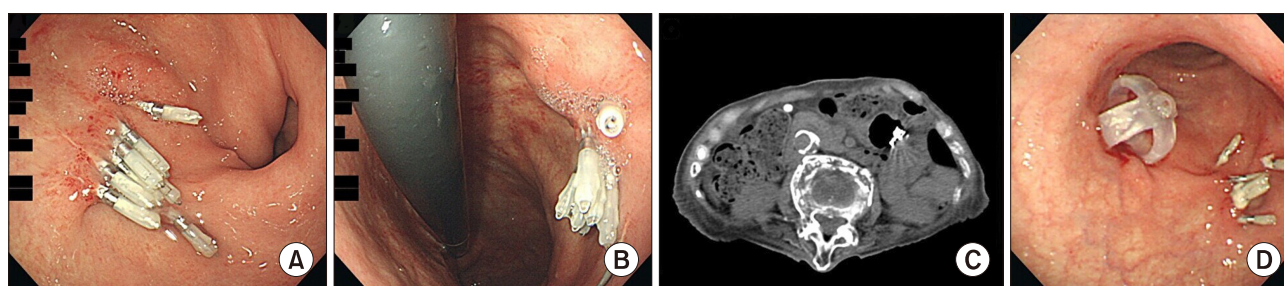
An 86-year-old woman was referred to the author's department with dysphasia and a prolonged consciousness disorder due to stroke. Since these symptoms had lasted for more than two months, there was an indication of percutaneous endoscopic gastrostomy (PEG). Informed consent for PEG was obtained from the patient's family, and PEG was attempted. Although two-point fixation of the abdominal wall and the stomach had been performed, gastric mucosal laceration had occurred during the insertion of a 24-Fr PEG catheter using the modified introducer technique (Fig. 1A, B). The PEG catheter was removed, and the laceration was immediately closed using endoscopic hemo-

clips (Fig. 1C). Computed tomography (CT) revealed a massive amount of intra-abdominal free gas and pneumoderma (Fig. 1D). Therefore, antibiotics were administered in sufficient quantities under parenteral nutrition for the prevention of peritonitis. Five weeks later, gastroscopy confirmed closure of the gastric perforation (Fig. 2A, B). Follow-up CT showed that the amount of free air remarkably decreased and pneumoderma disappeared eight weeks after endoscopic clipping (Fig. 2C). Finally, PEG was performed without any complications three months after the laceration (Fig. 2D).

The gastrostomy site is usually chosen on the anterior



**FIG. 1.** (A, B) Gastric mucosal laceration due to the insertion of a PEG catheter. (C) Endoscopic clipping for the gastric mucosal laceration. (D) Computed tomography showing massive intra-abdominal free gas (asterisk), pneumoderma (arrowheads), and clips (arrow).



**FIG. 2.** (A, B) Follow-up gastroscopy confirming closure of the gastric perforation. (C) Follow-up computed tomography showing that the amount of free air remarkably decreased and pneumoderma disappeared. (D) Successful percutaneous endoscopic gastrostomy and residual clips.

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wall of the stomach.<sup>1</sup> Owing to increased risk for early acute complications including bleeding and gastric perforation, it is desirable to avoid PEG at the posterior wall of the greater curvature.<sup>1</sup> In the present case, the choice of puncture site was difficult due to stomach rotation, and the perforation site was seen endoscopically as towards the posterior wall of the greater curvature (Fig. 2D). Furthermore, the puncture force was not transmitted vertically to the gastric wall during the posterior wall puncture (Fig. 1A, B). For the prevention of laceration, it is also important to achieve more sufficient gastropexy (i.e., three-point or four-point fixation) and insert the PEG catheter vertically to the gastric wall.<sup>1</sup>

## CONFLICT OF INTEREST STATEMENT

None declared.

## REFERENCE

1. Suzuki H, Joshita S, Nagaya T, Sato K, Ito A, Suga T, et al. Relationship of early acute complications and insertion site in push method percutaneous endoscopic gastrostomy. *Sci Rep* 2020;10:20551.