A safe and simple method for removal and replacement of a percutaneous endoscopic gastrostomy tube after "buried bumper syndrome"
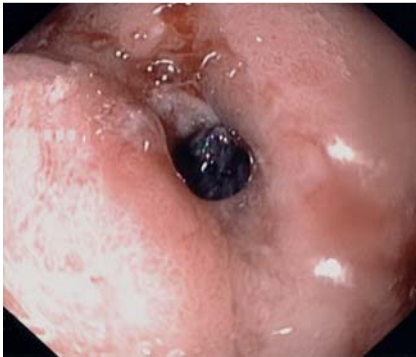

Fig. 1 Endoscopic view of "buried bumper syndrome". The internal flange of the percutaneous endoscopic gastrostomy (PEG) tube has migrated into the gastric wall.
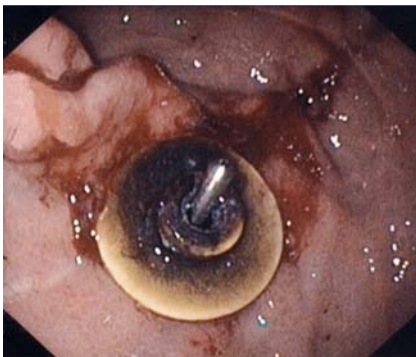

Fig. 2 The stainless steel probe (length 27 cm, diameter 3 mm) that is thinner at the tip (length 3 cm, diameter 2 mm).

Fig. 3 Endoscopic view of the luxated bumper with the tipp of the probe in the central orifice.

Fig. 4 A new percutaneous endoscopic gastrostomy (PEG) placed in the same tract. To avoid reoccurrence of buried bumper syndrome, the PEG tube was fixed as shown in the figure. At 3 days after the initial procedure, the final fixation was achieved following routine procedures.

Percutaneous endoscopic gastrostomy (PEG) tubes are preferred for long-term enteral nutrition. A rare complication of using PEG is the "buried bumper syndrome" (BBS) (○ **Fig. 1**). Various techniques have been described to remove the PEG tube in such situations, but they mostly require advanced endoscopic skills and are unsuccessful in most cases [1 – 5]. We have designed a novel endoscopic technique that does not require using a needle and a knife or complex endoscopic manipulation.

The gastroscopy is carried out under sedation. All the clips are removed from the external tube, and the external PEG tube is shortened, leaving a length of approximately 5 cm protruding from the skin. A sterile stainless steel, 27-cm long probe with a diameter of 3 mm and a 3-cm tip with a narrower diameter (2 mm) (○ **Fig. 2**) is inserted into the external PEG opening under endoscopic guidance. It is carefully passed forward until the tip of the probe is apparent in the gastric cavity (○ **Fig. 3**). Under slight pressure and gentle manipulation of the PEG tube, the bumper can be easily luxated through the mucosa into the gastric cavity. A standard polypectomy snare is then passed through the endoscope and the PEG tube is grasped distal to the bumper. Following removal of the steel probe, the exposed and remaining parts of the PEG tube can be recovered while withdrawing the endoscope. If required, another PEG can be placed at another site, although we have successfully used the same tract in five patients (○ **Fig. 4**). On follow up, all the five patients treated with this method had no further problems related to BBS.

The reported technique is simple and safe, and does not require any sophisticated endoscopic maneuvers. It can be used to remove or replace a PEG with a buried bumper in a routine endoscopic procedure under sedation, and can be carried out by all endoscopists.

Acknowledgment
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