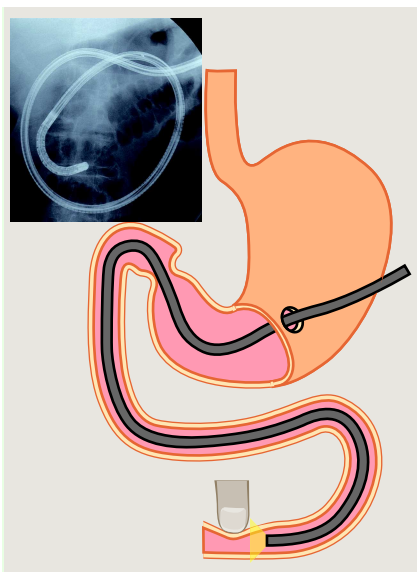
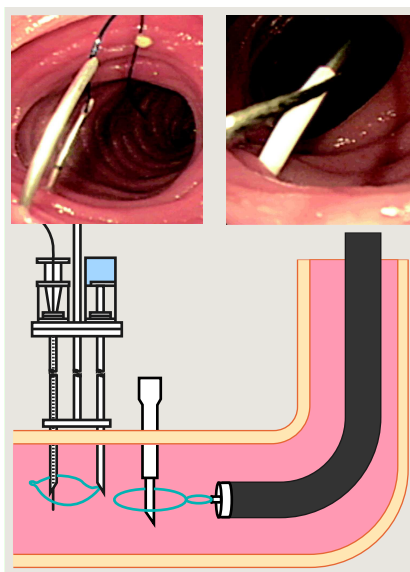


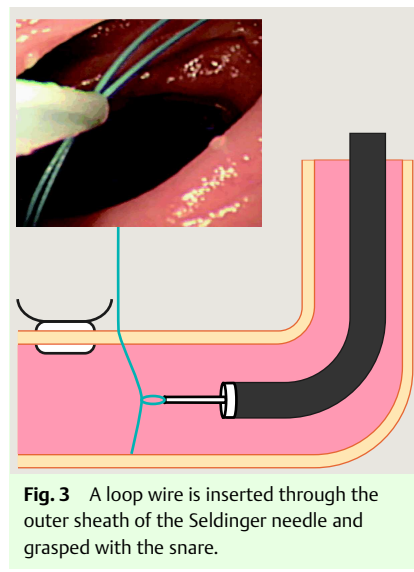
## Direct percutaneous endoscopic jejunostomy using a transgastrostomic endoscope in patients with previous endoscopic gastrostomy



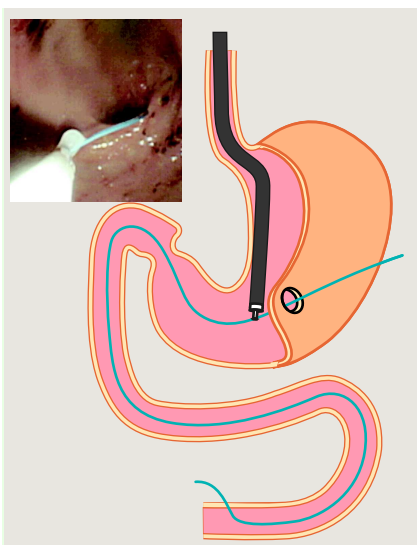
**Fig. 1** A small-caliber endoscope is inserted through the gastrocutaneous tract and advanced to the jejunum. The site of placement of the jejunostomy tube is determined by finger indentation and transillumination.



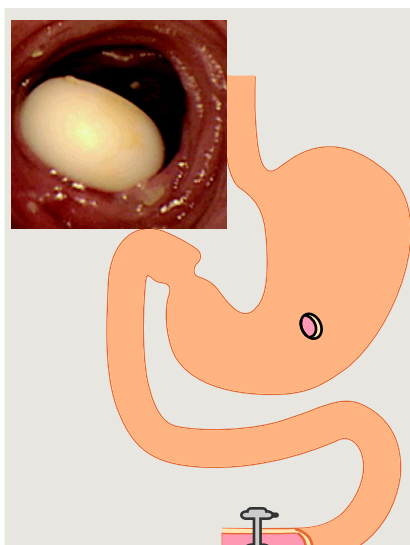
**Fig. 2** The jejunum is fixed by a double lumen gastropepy device. A Seldinger needle then punctures the abdomen and is inserted toward an open snare.



**Fig. 3** A loop wire is inserted through the outer sheath of the Seldinger needle and grasped with the snare.



**Fig. 4** The loop wire is grasped by an orally inserted endoscope and pulled out through the mouth with the endoscope.



**Fig. 5** A jejunostomy tube is connected to the loop wire and placed in the jejunum by the pull-through technique.

Direct percutaneous endoscopic jejunostomy (DPEJ) is an effective method for preventing aspiration following percutaneous endoscopic gastrostomy (PEG) [1].

Although DPEJ provides a stable access to maintain enteral feeding, it requires an endoscope of more than 160 cm long for tube placement [2].

We attempted DPEJ using a transgastrostomic endoscope in post-PEG patients. A small-caliber endoscope (GIF XP-240 or GIF XP-260; Olympus Optical Co., Ltd., Tokyo, Japan) was inserted and advanced to the jejunum through the mature gastrocutaneous tract (● Fig. 1). After conducting the jejunopexy with a double lumen gastropepy device (Create Medic Co., Ltd., Yokohama, Japan), a Seldinger needle was inserted through the abdomen toward an open snare using fluoroscopic guidance (● Fig. 2). Next, a loop wire was inserted through the outer sheath of the Seldinger needle, grasped by the snare (● Fig. 3), and pulled out with the endoscope through the gastrocutaneous tract. The loop wire was then grasped in the stomach by an orally inserted endoscope (● Fig. 4) and pulled out through the mouth. Finally, a jejunostomy tube was placed in the jejunum by the pull-through technique (● Fig. 5).

A total of 30 DPEJ procedures were attempted in 29 patients, resulting in 28 (93.3%) successful placements. One unsuccessful placement was due to jejunum migration away from the abdominal wall during the puncture. The other failure was due to a lack of transillumination. Maple et al. reported that the two major reasons for unsuccessful placement were

lack of transillumination and the inability to pass the endoscope up to the jejunum [3]. The reason for the higher rate of success in the present study is that insertion of the endoscope through a gastrostomy is easy and causes little distension of the stomach. Less distension of the stomach facilitates the placement of the jejunostomy tube. DPEJ using a transgastrostomic endoscope should be recommended in cases with previous gastrostomy.

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