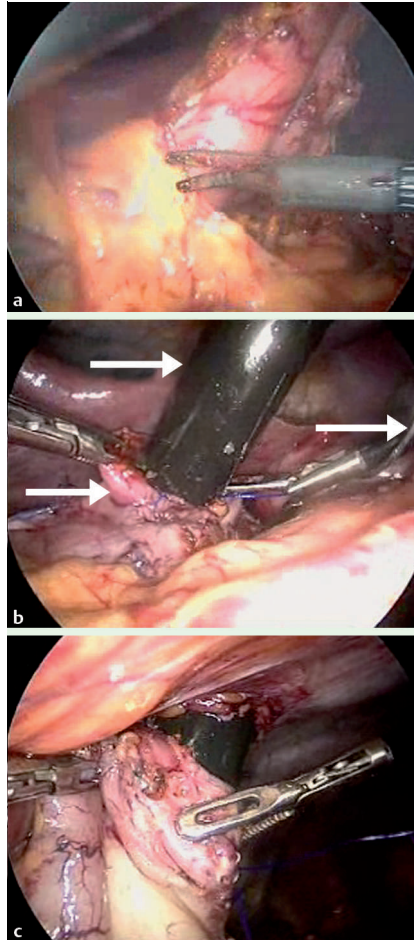


## Laparoscopically assisted transgastric endoscopy in Roux-en-Y gastric bypass: a modification of the technique

Laparoscopically assisted transgastric endoscopy is a well-accepted strategy to access the papilla of Vater in patients with a bypassed duodenum, as after Roux-en-Y gastric bypass [1–3]. In this technique the endoscope is introduced into the abdomen through a trocar and is advanced to the duodenum via a gastrotomy. Using this technique however, gastric fluid and endoscopic insufflated air might escape from the gastrotomy during manipulation of the endoscope. The presence of gastric contents inside the peritoneal cavity might cause peritonitis or abscess formation. The presence of insufflated room air in the peritoneal cavity could cause dangerous gas embolisms [4, 5].

We present a modification of laparoscopically assisted transgastric endoscopy that reduces the risk of these complications. The patient is placed in supine position. Four trocars are introduced as in routine foregut surgery. An additional 15 mm trocar is placed at the left upper quadrant. The first modification is to achieve mobilization of the greater curve of the antrum (● Fig. 1 a) until it can reach the anterior abdominal wall during pneumoperitoneum (● Fig. 1 c).

Next, as in the original technique, a purse-string is fashioned about 5 cm proximal to the pylorus and a gastrotomy is performed. In second modification, the 15 mm trocar itself is guided into the gastric remnant instead of introducing the naked scope into the remnant. This can only be achieved if the remnant has been sufficiently mobilized (● Fig. 1 b). Afterwards the purse-string is tightened. Next, an endoscope, covered in a sterile camera bag, is inserted through the 15 mm trocar. At the end of the procedure the gastrotomy is closed using a stapling device. These two alterations of the original technique allow proper control of the



**Fig. 1** a Mobilization of the antral remnant. b Trocar (arrow in the middle) is guided through the gastrotomy into the mobilized antrum (arrow on the left). Purse-string with needle (arrow on the right). c Antral pouch lifted up to the anterior abdominal wall.

site of insertion, which is important to prevent soiling by gastric contents and to reduce insufflated gas leakage.

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**G. Peeters, J. Himpens**

Department of Bariatric Surgery, St Blasius General Hospital, Dendermonde, Belgium

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### Corresponding author

**G. Peeters, MD**

St Blasius General Hospital

Kroonveldlaan 52

9200 Dendermonde

Belgium

Fax: +32-52-252410

geert.peeters@azsintblasius.be