Thoracoscopic and endoscopic cooperative surgery (TECS): a novel less invasive technique for resection of gastric tube cancer after esophagectomy

With recent improvements in the survival of patients after esophagectomy, the occurrence of secondary malignancies arising in the gastric tube has been increasing [1, 2]. However, resection of the reconstructed gastric tube with lymphadenectomy for gastric tube cancer (GTC) is an invasive procedure associated with high morbidity and mortality [3]. Local resection without lymphadenectomy may be reasonable in high risk patients. We have developed a novel thorascoscopic and endoscopic cooperative surgery (TECS) technique as a minimally invasive alternative.

Two patients underwent TECS for GTC after esophagectomy. Patient #1 had a 25 mm, undifferentiated, submucosal invasive adenocarcinoma (▶Fig. 1, ▶Fig. 2), which was considered difficult to resect completely by endoscopic submucosal dissection (ESD). Patient #2 had undergone ESD for a 10 mm depressed GTC (▶Fig. 3); however, histopathological analysis revealed noncurative resection because of submucosal invasion to 1150 μm, with a positive vertical margin. The absence of metastasis was confirmed preoperatively using computed tomography. The TECS steps (▶Video 1) were: 1) exposure of the gastric tube by thorascopy; 2) mucosal incision around the involved site and submucosal trimming using ESD technique, followed by full-thickness incision by endoscopy (ITknife 2; Olympus, Tokyo, Japan); 3) thorascoscopic resection with Harmonic scalpel (Ethicon, Somerville, New Jersey, USA); 4) suturing.

Both TECS procedures were performed under general anesthesia with orotracheal intubation and were successfully completed in 250 and 420 minutes, respectively. Blood loss was minimal. No perioperative complications such as anastomotic leaks, bleeding, or stricture were observed. Oral intake was started on postoperative days 7 and 8. The patients were discharged 14 and 25 days after the procedure.
ESD for GTC is sometimes technically difficult with fibrosis [4], and the long-term outcomes for noncurative patients are reportedly less satisfactory [5]. Although careful follow-up for possible metastasis is necessary in our patients, TECS was a feasible, safer, and less invasive therapeutic option for patients with noncurative GTC.

Endoscopy_UCTN_Code_TTT_1AT_2AF

Competing interests
None

The authors
Yoshiki Tsujii1, Makoto Yamasaki2, Yoshito Hayashi1, Koji Tanaka2, Tomoki Makino2, Yuichiro Doki2, Tetsuo Takehara1
1 Department of Gastroenterology and Hepatology, Osaka University Graduate School of Medicine, Suita, Japan
2 Department of Gastroenterological Surgery, Osaka University Graduate School of Medicine, Suita, Japan

Corresponding author
Tetsuo Takehara, MD, PhD
Department of Gastroenterology and Hepatology, Osaka University Graduate School of Medicine, 2-2 Yamadaoka, Suita, Osaka 565-0871, Japan
Fax: +81-6-68793629
takehara@gh.med.osaka-u.ac.jp

References

DOI https://doi.org/10.1055/a-0751-2540
Published online: 7.11.2018
Endoscopy 2019; 51: E5 – E6
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Endoscopy E-Videos
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos

Endoscopy_UCTN_Code_TTT_1AT_2AF