

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.JournalofSurgicalResearch.com](http://www.JournalofSurgicalResearch.com)

# Short-term outcomes of intracorporeal esophagojejunostomy using the transorally inserted anvil versus extracorporeal circular anastomosis during laparoscopic total gastrectomy for gastric cancer: a propensity score matching analysis



Xin Lu, MD, Yanfeng Hu, MD, Hao Liu, MD, PhD, Tingyu Mou, MD, Zhenwei Deng, MD, Da Wang, MD, Jiang Yu, MD,\*\* and Guoxin Li, MD, PhD\*

Department of General Surgery, Nanfang Hospital, Southern Medical University, Guangzhou, Guangdong Province, China

## ARTICLE INFO

### Article history:

Received 5 May 2015  
Received in revised form  
15 July 2015  
Accepted 13 August 2015  
Available online 20 August 2015

### Keywords:

Gastric cancer  
Laparoscopic total gastrectomy  
Esophagojejunostomy  
OrVil  
Propensity score matching

## ABSTRACT

**Background:** To assess the short-term outcomes of intracorporeal Roux-en-Y esophagojejunostomy using the transorally inserted anvil (OrVil) compared with extracorporeal circular Roux-en-Y anastomosis during laparoscopic total gastrectomy (LTG) for gastric cancer.

**Methods:** From January 2011–April 2014, a total of 165 consecutive patients with gastric cancer underwent either intracorporeal Roux-en-Y esophagojejunostomy ( $n = 25$ ) using the OrVil or extracorporeal circular anastomosis ( $n = 140$ ) during LTG. After generating propensity scores with six covariates, including gender, age, body mass index (BMI), Eastern Cooperative Oncology Group performance status, tumor location, and tumor size, 25 patients undergoing the OrVil method (intracorporeal group) were one-to-one matched with 25 patients undergoing the extracorporeal method (extracorporeal group). The short-term outcomes were compared between the two groups.

**Results:** Both groups were balanced regarding baseline variables. The total operative time was not significantly different between the two groups ( $216.5 \pm 24.9$  min versus  $224.0 \pm 30.5$  min,  $P = 0.344$ ), whereas either the duration of anvil insertion ( $9.9 \pm 2.4$  min versus  $12.9 \pm 2.0$  min,  $P < 0.001$ ) or reconstruction completion ( $44.4 \pm 9.4$  min versus  $50.1 \pm 5.4$  min,  $P = 0.012$ ) in the intracorporeal group was less. The mean length of mini-laparotomy in the intracorporeal group was shorter ( $5.6 \pm 0.4$  cm versus  $7.2 \pm 1.7$  cm,  $P < 0.001$ ). No significant differences were observed in intraoperative complication rate, estimated blood loss, length of proximal margin, or postoperative recovery course

Abstract of this article was accepted as a poster presentation in SAGES 2015 Annual Meeting. (program number: P453).

\* Corresponding author. Department of General Surgery, Nanfang Hospital, Southern Medical University, No. 1838, North Guangzhou Avenue, Guangzhou 510515, Guangdong Province, China. Tel.: +86 20 6164 1681; fax: +86 20 6278 7626.

\*\* Corresponding author. Department of General Surgery, Nanfang Hospital, Southern Medical University, No. 1838, North Guangzhou Avenue, Guangzhou 510515, Guangdong Province, China. Tel.: +86 20 6164 1681; fax: +86 20 6278 7626.

E-mail addresses: [balbc@163.com](mailto:balbc@163.com) (J. Yu), [gzliguoxin@163.com](mailto:gzliguoxin@163.com) (G. Li).

0022-4804/\$ – see front matter © 2016 Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.jss.2015.08.013>

(including the time to first flatus, liquid resumption, liquid, and soft diet) between the two groups. No patients suffered from anastomosis-related complications. The overall morbidity rates of 28.0% in the intracorporeal group and 32.0% in the extracorporeal group were comparable ( $P = 0.758$ ).

**Conclusions:** Intracorporeal Roux-en-Y esophagojejunostomy using the transorally inserted anvil system may be a safe procedure during LTG for gastric cancer. However, a longer follow-up in a well-designed randomized controlled trial is necessary to more thoroughly evaluate this technique.

© 2016 Elsevier Inc. All rights reserved.

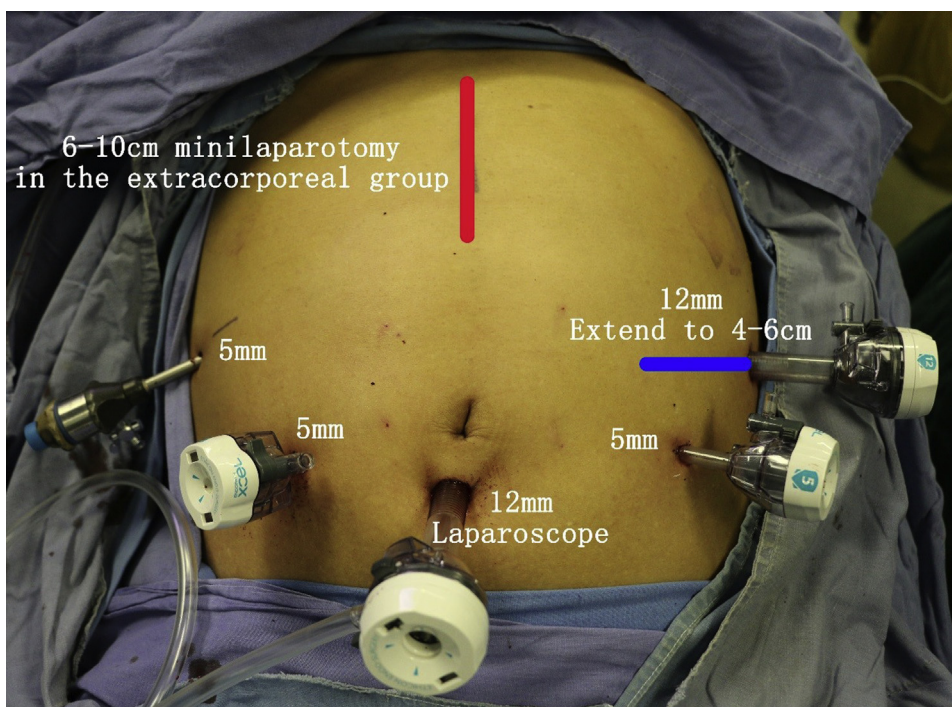
## 1. Introduction

Laparoscopic total gastrectomy (LTG) with lymphadenectomy is increasingly utilized in East Asia for the management of gastric cancer located in the middle or upper third of the stomach [1–3]. However, LTG remains a technically demanding surgery in terms of esophagojejunostomy, even in experienced hands. Thus, improvements to the anastomosis technique or strategy after LTG are needed. Among different strategies of Roux-en-Y esophagojejunostomy, circular stapling anastomosis as one of the traditional types is still widely used even though linear stapling anastomosis has been increasingly attempted recent years.

When esophagojejunostomy by circular stapler is adopted, extracorporeal Roux-en-Y anastomosis using a 6–10 cm minilaparotomy in the midline of the subxiphoid area is considered the standard method [4,5]. The key steps for extracorporeal circular anastomosis include a purse-string suture at the esophageal stump, anvil insertion to the esophagus transabdominally, and sequential fixation.

However, the higher resection demands of the distal esophagus, a narrow thoracic cage, and obese patients present challenges. In these circumstances, a relatively confined and deep view via minilaparotomy may hamper manipulation during esophagojejunostomy and result in an extended laparotomy to obtain adequate vision.

A transoral anvil delivery system (OrVil; Covidien, Mansfield, MA) provides a potential solution for these difficult issues. Intracorporeal Roux-en-Y anastomosis via the OrVil has been thoroughly described [6–14], primarily in the form of technical reports and case series. However, few studies have provided data on the short-term outcomes compared with conventional extracorporeal circular Roux-en-Y anastomosis. These comparative studies also presented some limitations, such as differences in baseline characteristics and selection bias [7,8]. Therefore, in the present study, we performed a propensity score matching (PSM) analysis to compare the short-term outcomes of intracorporeal Roux-en-Y anastomosis using the OrVil with conventional extracorporeal circular anastomosis.



**Fig. 1** – Placement of the working trocars. Regular position of trocars for LTG. In the intracorporeal group, the left upper port is usually extended to 4–6 cm to provide a passage to pull out the stomach and establish a single-site access system. (Color version of figure is available online.)

Download English Version:

<https://daneshyari.com/en/article/6253363>

Download Persian Version:

<https://daneshyari.com/article/6253363>

[Daneshyari.com](https://daneshyari.com)