



Totally laparoscopic 95% gastrectomy for gastric cancer: how to reduce complications while maintaining oncological radicality

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Comment on: Brenkman HJF, Gisbertz SS, Slaman AE, *et al.* Postoperative outcomes of minimally invasive gastrectomy versus open gastrectomy during the early introduction of minimally invasive gastrectomy in the Netherlands: a population-based cohort study. *Ann Surg* 2017;266:831-8.

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We have read with interest the article “*Postoperative outcomes of minimally invasive gastrectomy versus open gastrectomy during the early introduction of minimally invasive gastrectomy in the Netherlands*” by Brenkman *et al.* (1). One of the points of discussion is the need for technical challenges in the construction of the esophagojejunostomy during minimally invasive gastrectomy.

The authors did not find differences in the complications related to the anastomosis during the period of study in the propensity score matching group. However, they describe a greater number of complications at this level in the mini-invasive group (9%) compared to the open group (6%) in the total of the studied patients. The authors justify the difference by the learning curve, since there are more leaks in the first years (2012–2013) of the study (13.5%).

However, the authors do not differentiate the leaks present in total and subtotal gastrectomies. This could be another reason for the difference in the leak rate, since in the mini-invasive group more total gastrectomies are performed (51%) compared to the open group (40%). Moreover, it is known that total gastrectomy presents a high morbidity and mortality even in very experienced centres. The most feared complication is leakage of the esophagojejunal anastomosis (EJA), having been reported in large series between 5–15% (2), while in subtotal gastrectomy the gastrojejunal leak occurs in fewer cases (3). Mortality associated with anastomotic leakage is high, which could be the cause death in 1 out of every 3 patients (4).

Nevertheless, the complete resection of the stomach is performed with the objective of performing an oncologically satisfactory surgery or R0. With the same oncological objective, but in order to reduce complications, our group performs in selected patients almost total 95% mini-invasive gastrectomies with intracorporeal anastomosis.

The almost total gastrectomy was described in 1954 and subsequently has undergone different descriptions and modifications until in 2013 it was described in Japan as 95% laparoscopic gastrectomy for early gastric cancer (EGC) (5). However, there are no studies that show long-term results in advanced gastric cancer (AGC). Our group described the technique of almost total 95% laparoscopic gastrectomy in 2014 (6). In these cases, we maintain a gastric stump of 1–2 cm that allows the realization of a fully laparoscopic reproducible and safer anastomosis.

Since 2014, we have operated by this technique the patients with gastric cancer located in the antrum or gastric body, excluding tumours of the gastroesophageal junction, in whom a curative gastrectomy was proposed by laparoscopic surgery with R0 objective. An almost total 95% totally laparoscopic gastrectomy and a D2 lymphadenectomy were performed with Roux-en-Y reconstruction according to the technique that had already previously been described in another publication. R0 radical resection was performed in every patient and neither the proximal nor the distal margin was positive in any patient.

With this technique, we have been able to reduce the

complications of total gastrectomy to partial gastrectomy rates, where the anastomotic leak almost disappeared, without compromising the oncological radicality. Besides, the patients were included in a “fast track” multimodal recovery program. None of the patients had drains, nasogastric or bladder tubes and all had immediate mobilization through the use of adapted painkillers and antiemetic medication. This allowed a faster and better recovery of patients with significant decrease in hospital stay without increased complications.

Therefore, we believe that 95% gastrectomy allows selected patients to meet the oncological standards of resection in AGC in a reproducible and safe manner, reducing perioperative risks such as anastomotic leak. At the same time, it allows for a better postoperative recovery and a better nutritional status of the patient that could lead to a greater percentage of patients to receive adjuvant chemotherapy. It is a prospective series of patients, which only aims to show the safety of the procedure without oncological commitment. This technique has already been released and begins to reproduce, but randomized prospective studies with longer follow-up periods are necessary to assess the standardization of the technique (7).

We encourage the authors to report on whether the rate of complications was greater in total gastrectomies and to assess the need for total gastrectomy in all these cases. We would be interested in the assessment of the authors on the performance of 95% gastrectomy in selected cases in order to reduce the complications related to the anastomosis.

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appropriately investigated and resolved.

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