

Laparoscopic Gastrectomy for Cancer

Joseph D. Phillips, MD^a, Alexander P. Nagle, MD^{b,*},
Nathaniel J. Soper, MD^a

KEYWORDS

- Gastric cancer • Laparoscopic gastrectomy • Gastric carcinoma
- Minimally invasive gastrectomy

KEY POINTS

- Differences between Eastern and Western countries exist in both location and stage of gastric cancer at presentation. In addition, patients in the West tend to be, on average, older, have a higher BMI, and have more extensive comorbidities.
- Staging laparoscopy is done with adjunct studies such as peritoneal cytology and intra-operative ultrasound, which are valuable tools in the diagnostic evaluation of patients with potentially resectable disease.
- Laparoscopic gastrectomy is a challenging operation; advanced laparoscopic skills are required to perform an adequate lymphadenectomy and an intestinal anastomosis in an oncologically appropriate manner.
- Numerous studies from Asia have demonstrated the benefits of laparoscopic gastrectomy for malignancy while maintaining equivalent short-term and long-term oncologic outcomes compared with open surgery. In the United States, further experience and standardization are needed before these techniques will become widely accepted.
- As surgeons continue to investigate minimally invasive techniques for gastric cancer, new technologies may be developed that shorten the extensive learning curve required to master these complex procedures.

INTRODUCTION

Laparoscopic gastrectomy for gastric cancer was pioneered in Eastern Asia, where the incidence of gastric cancer is high and population-based screening programs exist. In 1994, Kitano and colleagues¹ performed the first laparoscopic-assisted distal

Disclosures: All authors have nothing to disclose.

^a Department of Surgery, Feinberg School of Medicine, Northwestern University, East Huron Street, Galter 3-150, Chicago, IL 60611, USA; ^b Department of Surgery, Feinberg School of Medicine, Northwestern University, 676 North Street Clair Avenue, Suite 6-650, Chicago, IL 60611, USA

* Corresponding author.

E-mail address: anagle@nmh.org

Surg Oncol Clin N Am 22 (2013) 39–57
<http://dx.doi.org/10.1016/j.soc.2012.08.004>

surgonc.theclinics.com

1055-3207/13/\$ – see front matter © 2013 Elsevier Inc. All rights reserved.

gastrectomy with lymph node dissection for gastric cancer. Since that time there has been a plethora of data from eastern Asia demonstrating the safety, feasibility, and oncologic outcomes of laparoscopic gastrectomy. In Western countries, Belgium and Italy have been on the forefront of advancing laparoscopic gastrectomy for malignancy. In 1993, Azagra and colleagues^{2,3} performed the first laparoscopic distal gastrectomy with Billroth II anastomosis for gastric cancer and, in 1995, this group reported the first laparoscopic total gastrectomy for cancer. Huscher and colleagues,⁴ from Italy, reported the only prospective, randomized trial to date in the West regarding 5-year clinical outcomes of laparoscopic-assisted subtotal gastrectomy compared with open surgery for stage-matched adenocarcinomas, demonstrating both safety and feasibility of the laparoscopic approach. Five-year survival numbers showed no significant difference between the two groups, but patients in the laparoscopic group had less blood loss, earlier oral intake and shorter hospital stay.

In the United States, the role of laparoscopy for the treatment of cancer has evolved considerably, but at a much slower pace. The short-term benefits of laparoscopy compared with laparotomy are apparent, but the main concerns have centered on oncologic equivalency. Specifically, these issues include recurrence and survival, the ability to laparoscopically obtain negative margins and perform an adequate lymph node dissection, the potential for local tumor dissemination and port-site metastasis, and the effects of CO₂ pneumoperitoneum. As these issues have been addressed by studies in support of laparoscopic surgery for colorectal cancer, the use of laparoscopy for malignancy has increased.^{5,6} However, in the United States, there are few data regarding the role of laparoscopic gastrectomy in the treatment of gastric carcinoma. Literature from the United States contains only five retrospective comparative studies, with the largest report including only 30 patients in the laparoscopic group. This may be related to the lower incidence of gastric cancer in the United States and the higher proportion of locally advanced disease at diagnosis.⁷ In addition, there is a significant learning curve for these advanced laparoscopic procedures. As such, in the United States, the use of laparoscopic gastrectomy for the treatment of gastric cancer is low and remains somewhat controversial. However, as investigation of advanced laparoscopy for gastric cancer continues and results of randomized trials become available, surgeons will gain more experience and techniques will become more standardized and broadly accepted. Currently laparoscopic gastrectomy for gastric cancer should be considered only in select cases. Patients with early mucosal disease seem to be good candidates for a laparoscopic approach given the low (<3%) risk of nodal disease.⁸ In addition, patients with advanced disease may be suitable candidates for a laparoscopic palliative resection. However, for most patients in the United States who present with locally advanced disease, laparoscopic gastrectomy should be recommended only within the confines of investigational trials at centers experienced in treating patients with gastric cancer.

EPIDEMIOLOGY

Gastric cancer is the fourth most commonly diagnosed malignancy worldwide, with nearly 990,000 cases per year.⁹ Approximately 70% of these cases occur in developing countries. It is the second leading cause of cancer mortality with an estimated 738,000 deaths per year. The highest incidence rates are in Eastern Asian countries, with a male predominance of 2 to 1. In the United States, there are approximately 21,300 cases diagnosed and more than 10,300 deaths yearly.¹⁰ Despite advances in multimodality therapy for gastric cancer, recurrence and mortality remain high. In the United States, the overall 5-year survival for all stages combined is 28%.¹⁰

Download English Version:

<https://daneshyari.com/en/article/3998723>

Download Persian Version:

<https://daneshyari.com/article/3998723>

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