

The Impact of Minimally Invasive Esophageal Surgery



Thomas Fabian, MD^{a,*}, John A. Federico, MD, FRCSC^b

KEYWORDS

• Esophagectomy • Minimally invasive esophagectomy • Esophageal cancer

KEY POINTS

- Esophagectomy is one of the larger more complex surgeries commonly performed on the human body.
- Esophageal cancer is the 18th most common malignancy and accounts for less than 1% of all cancer cases in the United States annually.
- The National Institutes of Health estimates that of the 16,910 new cases diagnosed in the United States in 20,016 there will be 15,690 deaths and only 18.4% of patients will survive 5 years. This is partly attributable to the late presentation of the disease.

INTRODUCTION

To most Americans, esophageal cancer remains a fairly unknown malignancy. According to the National Institutes of Health (NIH) esophageal cancer is the 18th most common malignancy and accounts for less than 1% of all cancer cases in the United States annually. This is despite that adenocarcinomas of the esophagus are increasing at a faster rate than any other malignancies. The annual incidence of esophageal cancer in the United States is 4.3 cases per 100,000. Yet, for physicians caring for these patients, the relative infrequency of the disease provides little solace and even less if the disease has a personal effect.

The NIH estimates that of the 16,910 new cases diagnosed in the United States in 20,016 there will be 15,690 deaths and only 18.4% of patients will survive 5 years. This is attributable in part to the late presentation of the disease. It is estimated by the Surveillance, Epidemiology, and End Results (SEER) database that 30% of tumors are limited to the primary site and nearly three-fourths of patients have regional (31%) and distant (38%) disease. Poor long-term survival is not surprising in advanced

Disclosures: None.

^a Department of Surgery, Albany Medical College, 47 New Scotland Avenue, Albany, NY 12159, USA; ^b Department of Surgery, Kalispell Regional Medical Center, 310 Sunnyview Ln, Kalispell, MT 59901, USA

* Corresponding author.

E-mail address: tfabs@yahoo.com

Surg Clin N Am 97 (2017) 763–770
<http://dx.doi.org/10.1016/j.suc.2017.03.005>

surgical.theclinics.com

0039-6109/17/© 2017 Elsevier Inc. All rights reserved.

disease cases but survival among patients with localized disease should be considerably better and perhaps comparable to other malignancies. Regrettably, this is not the case. Again, based on the SEER database, 5-year survival for localized tumor is 41%. This is considerably lower than lung cancer for example (70%).

There are several axioms that are frequently referred to regarding esophageal malignancies. Often it is stated that the tumor is more aggressive, implying worse outcome as a result of disease. Certainly, from an anatomic perspective, it is more likely to spread to lymphatics at an earlier depth of invasion than in other malignancies for the gastrointestinal tract. For example, tumor stage T1b tumors involving the submucosa have a 5% risk of lymph node metastasis and T2 tumors invading the muscularis propria have a 20% risk of metastatic lymphatic involvement. Another perceived adverse predictor of risk is age. The median age at diagnosis is 67 years old (NIH) and nearly 40% of patients diagnosed are less than 65 years old. Others point to lower health care dollars spent on esophageal cancer research. The amount of money spent on esophageal cancer per death is \$1542 per patient, which is similar to other less funded diseases, such as lung cancer \$1553. These numbers pale in comparison to other malignancies, such as cervical cancer, \$18,870; breast cancer, \$14,095; and lymphoma, \$12,791. These issues may lead to treatment bias, lack of optimism in treatment, and frequently undertreatment of the tumor. This negative outlook is further exacerbated by realistic and unrealistic morbidity and mortality associated with esophagectomy. In fact, many patients who are potentially resectable are either not offered surgery or decline surgery, and are, therefore, less likely cured of their disease. Dubecz and colleagues¹ analyzed multiple databases to review care and outcomes of more than 25,000 esophageal subjects with cancer. This large study found only 44% of subjects with potentially resectable disease underwent surgery in the state of New York. In other words, 56% of subjects with resectable disease were undertreated for their malignancy. This pervasive undertreatment likely plays a role in the poor long-term survival of esophageal patients with cancer.

Surgeons who care for these patients have been eager to see real change in short-term and long-term outcomes. Advances in diagnosis, screening, referral, and treatment of this cancer have been slow in coming and, while waiting for those changes, work continues toward improving surgical outcomes, techniques, and expanding the reach of esophagectomy to deserving patients. To many, these advances have been dramatic and profound. Leading the way to new innovation has been the use of minimally invasive techniques in esophagectomy. This article discusses the surgical innovations that have occurred in the last decade and their impact on patients with esophageal cancer.

THE EVOLUTION OF MINIMALLY INVASIVE ESOPHAGECTOMY

Surgical resection of esophageal malignancy is not novel or unique, and remains a mainstay of the treatment of this malignancy. However, as it relates to morbidity and mortality, it can be argued that esophagectomy is one of the larger more complex surgeries commonly performed on the human body. When comparing esophagectomy mortality to that of other major elective surgery, others may pale in comparison. The mortality in the twenty-first century has been reported as 13% nationwide and as high as 23% at low-volume institutions.² The disparity is equally compelling in terms of morbidity. Studies routinely demonstrate morbidity rates in esophagectomy series are above 50%.³⁻⁶ Long-term morbidity, as it relates to dysphagia, weight loss, and quality of life (QoL), can be disappointing.

Download English Version:

<https://daneshyari.com/en/article/5734972>

Download Persian Version:

<https://daneshyari.com/article/5734972>

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