



## Minimally Invasive Esophagectomy Is There an Advantage?

Richard J. Battafarano, MD, PhD

Division of Thoracic Surgery, Johns Hopkins University School of Medicine, 600 North Wolfe Street, Blalock 240, Baltimore, MD 21287, USA

### Keywords

- Minimally invasive esophagectomy
- Transhiatal esophagectomy
- Transthoracic esophagectomy
- Anastomotic complications of esophagectomy
- Morbidity and mortality associated with esophagectomy

### Key points

- The operative morbidity and mortality associated with esophagectomy for esophageal cancer remain significant.
- There has been an evolution of surgical procedures used to treat this disease beginning with the transthoracic esophagectomy and the transhiatal esophagectomy.
- More recently, advanced laparoscopic and thoracoscopic techniques have been applied to esophageal resection and reconstruction, and this procedure is now described as a minimally invasive esophagectomy.
- Surgeons and hospitals caring for patients with esophageal cancer must remain focused on performing esophagectomies with a low incidence of anastomotic complications and a low mortality regardless of which operative procedure is performed.

## INTRODUCTION

The American Cancer Society estimates that 18,170 men and women (14,660 men and 3510 women) will be diagnosed with esophageal cancer in 2014, and the per-capita incidence of this lethal disease continues to increase. Although squamous cell carcinoma is the most common esophageal malignancy

---

The author has nothing to disclose.

*E-mail address:* rbattaf1@jhmi.edu

0065-3411/16/\$ – see front matter

<http://dx.doi.org/10.1016/j.yasu.2016.03.002> © 2016 Elsevier Inc. All rights reserved.

diagnosed worldwide, the incidence of adenocarcinoma in the United States has increased dramatically and now accounts for approximately 70% of newly diagnosed esophageal cancers. Importantly, esophageal cancer is now the seventh leading cause of cancer death in American men and will be responsible for more than 15,000 cancer deaths this year [1].

For those patients with esophageal cancer without distant metastatic disease, every effort is made to offer esophageal resection to these patients as part of the overall care of this disease. Despite improvements in anesthesia, surgical technique, and postoperative care, the morbidity and potential mortality associated with esophagectomy remain significant. Advances in laparoscopic and thoracoscopic techniques have been applied to esophageal resection and reconstruction, and this procedure is now described as a minimally invasive esophagectomy (MIE). Analysis of how this procedure might contribute to the overall care of patients with esophageal cancer is the focus of this review.

## **HISTORICAL NOTE**

The first resection of the intrathoracic esophagus followed by esophagogastric reconstruction was reported by Ohsawa [2] in Japan in 1933. This approach was adopted in the United States after Adams and Phemister [3] reported their experience in 1939. However, transthoracic resection of the esophagus via laparotomy and right thoracotomy as treatment for esophageal cancer was not routinely performed until it was popularized by the English surgeon Ivor Lewis [4] in 1946; this operation continues to bear his name. McKeown [5] introduced the 3-incision procedure in order to improve proximal margins by first mobilizing the intrathoracic esophagus via a right thoracotomy followed by completion of the resection and reconstruction via laparotomy and neck incisions. Other variations of the transthoracic approach include the wide en-bloc esophagogastric resection popularized by Skinner [6], DeMeester, and Altorki and colleagues [7]. The left thoracoabdominal approach allows excellent visualization of both the intrathoracic esophagus and stomach in one operative field [8,9].

In an effort to decrease the morbidity and mortality of transthoracic resection of the esophagus, Orringer and colleagues [10,11] at the University of Michigan popularized the transhiatal esophagectomy (THE) performed via a laparotomy and left neck incision. By eliminating the thoracotomy incision, they hoped to limit the respiratory complications associated with the transthoracic procedure. In addition, they hoped to avoid the creation of intrathoracic anastomoses that historically were associated with high mortality by creating the anastomosis in the neck. Luketich and colleagues [12,13] at the University of Pittsburgh popularized the MIE using laparoscopic and thoracoscopic techniques. They initially performed a laparoscopic/thoracoscopic 3-incision procedure (McKeown), but more recently have converted to a laparoscopic/thoracoscopic operation with placement of the esophagogastric anastomosis in the right thorax.

Download English Version:

<https://daneshyari.com/en/article/4277226>

Download Persian Version:

<https://daneshyari.com/article/4277226>

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