



Impact of splenic node dissection on short-term outcome and survival following esophagectomy

J. Liu^{*,a}, X. Liu^a, J. Zhang, Q. Liu, W. Hu

Department of Thoracic Surgery, The First Affiliated Hospital of Zhengzhou University, Zhengzhou, PR China

Accepted 7 October 2016

Available online ■ ■ ■

Abstract

Background: The purpose of this study was to investigate the impact of splenic node dissection on short-term outcomes and survival after esophagectomy in patients with thoracic esophageal squamous cell carcinoma (ESCC).

Methods: We retrospectively analyzed the clinical data of 1282 consecutive patients with thoracic ESCC who underwent esophagectomy in the First Affiliated Hospital of Zhengzhou University from January 2005 to December 2013.

Results: Of all 1282 patients, there were 964 without splenic node dissection and 318 with splenic node dissection. The average operative time in the splenic node nondissection group was significantly shorter than dissection group, and blood loss in the nondissection group was significantly less than dissection group (all $p < 0.05$). The comparison of overall survival curves between the splenic node nondissection group and dissection group showed no significant difference ($p > 0.05$). In the dissection group, there were 15 patients (4.7%) with confirmed splenic node metastasis by postoperative pathologic examination. Patients with splenic node metastasis had a worse cumulative survival compared with those without splenic node metastasis ($p < 0.05$). Compared with nondissection group, prophylactic splenic node dissection failed to improve the survival rate significantly ($p > 0.05$).

Conclusion: The frequency of splenic node metastasis is low in thoracic ESCC. Splenic node metastasis indicates a worse prognosis for patients with thoracic ESCC. Splenic node dissection might be futile for patients with thoracic ESCC.

© 2016 Elsevier Ltd, BASO ~ The Association for Cancer Surgery, and the European Society of Surgical Oncology. All rights reserved.

Keywords: Esophageal squamous cell carcinoma; Esophagectomy; Splenic node; Lymph node dissection

Introduction

Esophageal carcinoma is one of the most refractory malignancies in the digestive system. Squamous cell carcinoma (SCC) accounts for most of the esophageal malignant tumors in China, in contrast to the predominance of adenocarcinoma in the Western world.¹ The outcome of patients with esophageal squamous cell carcinoma (ESCC) continues to be poor, with a 5-year survival rate ranging from 26.2% to 49.4%.^{2–6} Lymph node metastasis is a common pathway for the spread of esophageal cancer; nodal stage is considered the most reliable predictor of survival after esophagectomy with lymphadenectomy in esophageal

cancer patients without systemic metastasis, and the presence of nodal metastasis is indicative of a high risk for disease recurrence.^{7,8}

Despite recent advances in multidisciplinary approaches including radiotherapy and chemotherapy,⁹ surgical resection remains the standard treatment for potentially resectable esophageal carcinoma. However, there is no unified standard for esophagectomy for esophageal carcinoma internationally, and the most controversial point is the extent of lymph node dissection. Too extensive lymph node dissection could increase the surgical trauma and the incidence of complications.^{10–13} In recent years, some investigators proposed that lymph node dissection for some regions in specific patients can be omitted, such as subcarinal nodes and common hepatic nodes.^{14–17} But for the splenic nodes, it was rarely reported in the literature. Given this condition, we conducted this retrospective study to compare short-term outcome and survival between the

* Corresponding author. Department of Thoracic Surgery, The First Affiliated Hospital of Zhengzhou University, 1 Jianshe Road, East, Zhengzhou 450052, PR China. Fax: +86 0371 66970906.

E-mail address: liujingeng888@163.com (J. Liu).

^a Jingeng Liu and Xia Liu contributed equally to this work.

splenic node nondissection group and dissection group. Our purpose was to clarify the impact of splenic node dissection on short-term outcome and survival following esophagectomy in patients with thoracic ESCC.

Patients and methods

Study cohort

This retrospective study was approved by the Ethics Committees of the First Affiliated Hospital of Zhengzhou University. The records of all patients who underwent esophagectomy for ESCC at the First Affiliated Hospital of Zhengzhou University from January 2005 to December 2013 were identified. The inclusion criteria for selecting patients: 1. patients diagnosed with ESCC; 2. the tumors located in the thoracic esophagus; 3. patients underwent esophagectomy and reached R0 resection; 4. One of the following three surgical approaches was selected: the left transthoracic procedure, the Ivor-Lewis approach, and the cervicalthoracoabdominal procedure. The exclusion criteria for selecting patients: 1. patients with cervical esophageal carcinoma or gastroesophageal junction carcinoma; 2. patients with non-SCC diseases; 3. patients with non-R0 resection; 4. patients with noncommon surgical approaches; 5. patients with neoadjuvant and/or adjuvant chemotherapy and/or radiotherapy; 6. patients with concurrent other malignant diseases or other previous primary cancers. Finally, 1282 patients met the inclusion criteria. Tumor, node, and metastasis descriptors, as well as the staging classification used for this analysis, were those defined in the American Joint Committee on Cancer Staging Manual (7th edition).

Surgical procedure

Surgical procedures included primary tumor resection and lymph node dissection. The most commonly used surgical approaches included the left transthoracic procedure, the Ivor-Lewis approach, and the cervicalthoracoabdominal procedure. The left transthoracic procedure and Ivor-Lewis procedure with anastomosis of the upper chest were performed for all tumors of the lower thoracic esophagus and some tumors of the middle thoracic esophagus. The cervicalthoracoabdominal procedure was used for all tumors of the upper thoracic esophagus and some tumors of the middle thoracic esophagus. In this cohort of patients, en bloc lymph node dissection was performed, including the subcarinal, paraesophageal, pulmonary ligament, diaphragmatic, and paracardial lymph nodes, as well as those located along the lesser gastric curvature, the origin of the left gastric artery, the celiac trunk, the common hepatic artery, and the splenic artery. The definition of splenic node dissection was the region located along the splenic artery from the origin of the splenic artery to the splenic hilum. Splenic node dissection was performed in patients with swollen nodes located along the splenic artery but was

not performed in patients without swollen nodes located along the splenic artery. The same criteria were applied to celiac node dissection. In addition, the lymph nodes, such as aortopulmonary, anterior mediastinal, and left tracheobronchial nodes were removed when the left transthoracic procedure was used, and the right superior mediastinal lymph nodes and right tracheobronchial nodes were removed when Ivor-Lewis procedure or cervicalthoracoabdominal procedure were used. Cervical lymphadenectomy was not systematically undertaken. For patients with cervical anastomosis, the lymph nodes exposed in the cervical incision were also dissected. The alimentary tract was reconstructed using the gastric pull-up technique; if the stomach was unavailable, a jejunal loop or the left colon was used. The surgeons identified the sites of the nodes during the operation. All resected specimens were submitted for pathologic examination.

Follow-up assessment

A follow-up examination was generally scheduled every 3 months for the first year, every 4 months for the second year, and twice yearly thereafter. The regular follow-up assessment included physical examination, blood chemistry analysis, tumor markers (carcinoembryonic antigen, SCC antigen), computed tomography scan, esophagography, ultrasonography, and endoscopy. However, examinations were performed sooner if the patient had specific symptoms. April 2015 was the last contact date for survival. The median time from the operation to the last contact date for the entire cohort was 29.0 months (range, 1.0–166.0 months).

Statistical analysis

Continuous variables were compared using independent-samples t tests. Values were expressed as mean \pm standard deviation. The Pearson chi-squared test was used to determine the significance of differences between groups for dichotomous variables. Survival was calculated by the Kaplan–Meier method, and the log-rank test was used to assess differences in survival between groups. A two sided $p < 0.050$ was considered statistically significant. Survival time was measured from the date of the operation to the date of death or the last follow-up. Patients who were lost during the follow-up duration were censored at the last time of contact. Patients alive at the end of the study were also classified as censored for purpose of data analysis. The Efficacy Index (EI) was defined as the incidence of splenic node metastasis (%), multiplied by the 5-year survival rate (%) of patients with splenic node metastasis and divided by 100.¹⁸ Modified EI was calculated with 3-year survival rate instead of 5-year survival rate.¹⁹ The statistical analysis was performed with SPSS 17.0 software (SPSS, Chicago, IL).

Download English Version:

<https://daneshyari.com/en/article/5700895>

Download Persian Version:

<https://daneshyari.com/article/5700895>

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