

Esophageal Surgery Division

Introduction

About 350 new patients with esophageal carcinoma were admitted to the National Cancer Center Hospital in 2004. Treatments were determined by the stage of the tumor. This division cooperates with the Gastrointestinal Oncology Division, the Radiation Oncology Division and other divisions to use a multidisciplinary team approach to treating patients. 52 patients underwent endoscopic esophageal mucosal resection by the Endoscopy Division in 2004. 143 patients received chemoradiotherapy as their primary treatment. We have also cooperated with the Head and Neck Surgery Division for cervical esophageal carcinomas and with the Gastric Surgery Division for tumors in the esophago-gastric junction. In Japan, squamous cell carcinomas constitute the largest proportion of esophageal tumors, and the proportion of adenocarcinomas remained still 3.5% in our institution in 2004.

Routine Activities

The Esophageal Surgery Division consists of three staff surgeons, one chief resident and three rotating senior residents. A division conference is held every week in which surgeons, medical oncologists, radiation oncologists, endoscopists, radiologists, and pathologists who are involved in the treatment of esophageal diseases meet and discuss the diagnosis, staging, and treatment plans for patients with esophageal tumors. A monthly conference for clinical diagnosis and pathology demonstration of the esophageal tumors is held to discuss various themes.

Every week, three patients with esophageal carcinoma undergo esophagectomy. A hundred and thirty-two patients underwent esophageal surgery with 3 operation-related deaths in 2004. A curative resection was completed for 92% of the patients

undergoing esophagectomy reflecting strict preoperative staging. Since 1982, the area of lymph node dissection has been extended to the whole upper mediastinum and neck in addition to the lower mediastinum and abdomen. The three-field dissection is our standard procedure now. It was completed in 85% of transthoracic esophagectomy.

Number of patients who receive definitive chemoradiotherapy as their primary treatment is rapidly increasing in Japan. Persistent or recurrent local disease is not infrequent after chemoradiotherapy. Nine patients received salvage esophagectomy after failure of chemoradiotherapy in 2004. From 1998 to 2004, 38 patients underwent salvage esophagectomy, and as compared to those without preoperative therapy, their hospital stay was long (40.6 days vs 25.9 days), and postoperative mortality (13% vs 3%) and anastomotic leak rates (26% vs 11%) were high.

Research Activities

The outcomes with 2-field and 3-field lymph node dissection for patients with squamous cell carcinoma of the lower thoracic esophagus were evaluated. Of the 156 patients, upper and/or middle mediastinal lymph node metastases occurred in 42% and their 5-year survival rate was 23.3%. Thirteen (27%) of 48 patients with upper and/or middle mediastinal lymph node metastases treated with 3-field dissection had simultaneous cervical lymph node metastases and their 5-year survival rate was 23.1%. The 3-field approach for extensive lymph node dissection provides better survival benefit for patients with squamous cell carcinoma of the lower thoracic esophagus compared to 2-field lymph node dissection when lymph node metastases are present in the upper and/or middle mediastinum.

Clinical Trials

The trial of postoperative adjuvant chemotherapy after radical esophagectomy (JCOG 9204) revealed better 5-year disease-free survival rate than surgery alone. The next multi-institutional randomized controlled trial comparing preoperative and postoperative chemotherapy with cisplatin and 5-FU with radical esophagectomy (JCOG 9907) is in registration in cooperation with the Gastrointestinal Oncology Division.

The trial of chemoradiotherapy without surgery for a Stage I lesion (JCOG 9708) showed that chemoradiotherapy could be considered as a test arm of phase III study to compare with surgery. The multi-institutional randomized controlled comparison between surgery and chemoradiotherapy for a Stage I lesion is planned for the next trial.

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Table 1. Number of patients

Squamous cell carcinoma	117
Adenocarcinoma	11
Basaloid	1
GIST	1
Melanoma	1
Leiomyoma	1
Total	132

Table 2. Type of procedure

Rt. Thoracotomy with 3-field	95
Rt. Thoracotomy with 2-field	17
Lt. thoracoabdominal	5
Transhiatal	2
Cervical	6
Abdominal	2
Local resection	2
Exploratory	3
Total	132

Table 3. Operative morbidity and mortality

Leakage	37
Recurrent nerve paralysis	21
Pneumonia	2
Empyema	8
Mediastinitis	2
Chylothorax	1
Tracheostomy	2
Operative death within 30 days	1

Table 4. Survival rates

Clinical stage	No. of pts.	5yr survival
I	79	75.9
II	112	49.5
III	133	27.0
IV	79	19.8
Total	403	41.3

Stage: UICC TNM (7th ed)

Op. year: 1995-1999