CASE REPORT – OPEN ACCESS

International Journal of Surgery Case Reports 44 (2018) 24–28

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

A case of separation surgery with drainage tube-less (DRESS) esophagostomy for advanced cancer with a respiratory fistula

Yukinori Tanoue*,[1], Shinsuke Takeno*,[1], Fumiaki Kawano, Kousei Tashiro, Rouko Hamada, Yasuyuki Miyazaki, Atsushi Nanashima

Division of Gastrointestinal-Endocrine-Pediatric Surgery, Department of Surgery, University of Miyazaki Faculty of Medicine, Kihara 5200, Kiyotake, Miyazaki, 8891692, Japan

ARTICLE INFO

Article history:
Received 2 February 2018
Accepted 12 February 2018
Available online 13 February 2018

Keywords:
Case report
Esophagopulmonary fistula (EPF)
Esophagorespiratory fistula (ERF)
Esophageal cancer
Esophageal separation surgery
Drainage tube-less (DRESS) esophagostomy

ABSTRACT

INTRODUCTION: An esophagorespiratory fistula (ERF) can cause severe pneumonia or a lung abscess which progresses to life-threatening sepsis. A case of a patient with esophageal cancer and an esophagopulmonary fistula (EPF) who underwent separation surgery with drainage tube-less (DRESS) esophagostomy and was promptly started on definitive chemoradiotherapy (CRT) is reported.

PRESENTATION OF CASE: A 79-year-old man visited a clinic with a month-long history of dysphagia. Esophageal cancer at the middle thoracic esophagus was detected, and invasion of the left main bronchus and lower lobe of the right lung was seen on contrast-enhanced computed tomography (CT). Three weeks later, the patient was transferred to our hospital. CT showed a lung abscess in the lower lobe of the right lung that continued into the adjacent esophageal cancer. Due to the EPF, the patient underwent emergency surgery that consisted of esophageal separation surgery and double bilateral esophagostomy and enterostomy. Definitive CRT for the esophageal cancer was started from postoperative day 25. At six-month follow-up, the patient achieved relapse-free survival.

DISCUSSION: Separation surgery with a DRESS esophagostomy provides good control of inflammation because of division of the respiratory tract from the alimentary tract, which allows prompt initiation of CRT. Alternatively, a DRESS esophagostomy allows patients to be free from any tube trouble.

CONCLUSION: Separation surgery with a DRESS esophagostomy for an ERF is a promising method to improve patient quality of life that is less invasive, controls inflammation, and facilitates subsequent definitive CRT.

1. Introduction

Once esophagorespiratory fistulas (ERF) including esophagopulmonary fistulas (EPF) occur in patients with esophageal cancer with invasion to adjacent organs, saliva and food flow into the respiratory tract through the fistula and can cause fever, cough, and dyspnea; they frequently become refractory and cause severe illness [1,6]. An esophageal covered expandable metallic stent (EMS) is a less-invasive treatment with a high rate of fistula closure [3,6]. However, since a high incidence of complications such as perforation and bleeding was noted in a previous report, the indication for stent placement should be carefully considered [3,4,9].

An esophageal cancer patient with an EPF who underwent separation surgery with drainage tube-less (DRESS) esophagostomy and whose inflammation from the EPF could be effectively controlled, which facilitated the prompt administration of definitive chemoradiotherapy (CRT), is reported.

This case report has been reported in line with the SCARE criteria [14].

2. Presentation of case

A 79-year-old man visited a clinic with a month-long history of dysphagia. Esophageal cancer at the middle thoracic esophagus was seen on endoscopic examination and esophagography (Fig. 1a, b). On contrast-enhanced computed tomography (CT), the esophageal cancer seemed to invade the left main bronchus and the lower lobe of the right lung. There were metastases to regional lymph nodes, but there was no evidence of distant organ metastases.

Three weeks later, the patient was transferred to our hospital and was examined in detail. Though fever and respiratory symptoms were not observed, positron emission tomography (PET)-CT and urgent CT detected a lung abscess in the lower lobe of the right

Abbreviations: DRESS, drainage tube-less; ERF, esophagorespiratory fistula; EPF, esophagopulmonary fistula; CRT, chemoradiotherapy; CT, computed tomography; EMS, expandable metallic stent; PET-CT, positron emission tomography-CT; CDDP, cisplatin; 5-FU, 5-fluorouracil.

* Corresponding authors.
E-mail addresses: yukinori_tanoue@med.miyazaki-u.ac.jp (Y. Tanoue), shinsuke_takeno@med.miyazaki-u.ac.jp (S. Takeno).

[1] Contributed equally to this report as the first author.

https://doi.org/10.1016/j.ijscr.2018.02.013

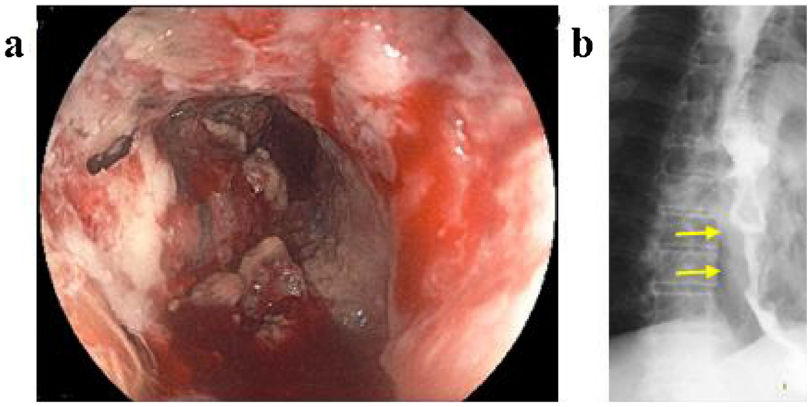

Fig. 1. Endoscopic examination and Esophagography.
a, Endoscopic examination shows esophageal cancer with stenosis.
b, Esophagography (arrow) show esophageal cancer at the middle thoracic esophagus.

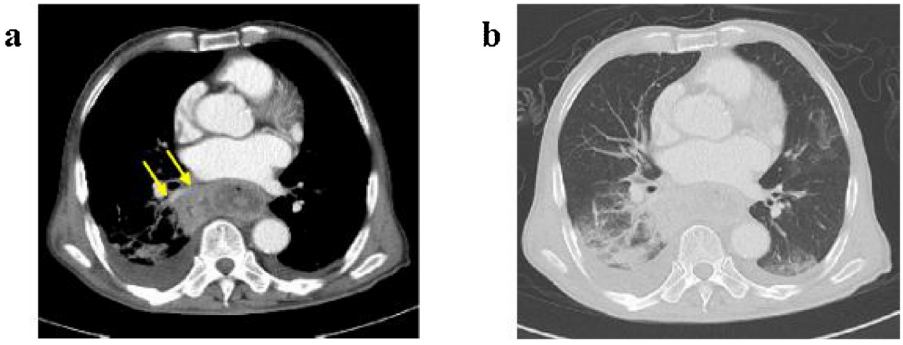

Fig. 2. Urgent computed tomography (CT) on the day of an esophagopulmonary fistula (EPF).
a, CT shows a lung abscess (arrow) in the lower lobe of the right lung that continues into adjacent esophageal cancer.
b, CT shows infiltrative shadows in the peripheral lung field and a pleural effusion.

lung that continued into the adjacent esophageal cancer, infiltrative shadows in the peripheral lung field, and a pleural effusion (Fig. 2a, b). Blood tests showed an increased white blood cell (WBC) count of 9600/mm^2 and a C-reactive protein of 13.43 mg/dL (Table 1). Due to the presence of the EPF, the patient underwent emergency surgery that consisted of esophageal separation surgery and double bilateral esophagostomy and enterostomy. Antibiotic drug therapy for pneumonia and lung abscess achieved a favorable outcome (Fig. 3a, b).

Definitive CRT for the esophageal cancer was started from postoperative day 25. Radiotherapy was performed with a total dose of 46.8 Gy. Chemotherapy consisted of cisplatin (CDDP) and 5-fluorouracil (5-FU) therapy in 2 courses. Radiotherapy could not be completed because of sepsis due to aspiration pneumonia. The aspiration pneumonia improved with intensive treatment. At 90 days after surgery, the patient was discharged from the hospital. At six-month follow-up, the patient had achieved relapse-free survival and is currently symptom-free.

2.1. Separation surgery with DRESS esophagostomy

A bilateral neck diagonal incision was made. In the left side of the neck, the cervical esophagus was isolated and retracted by taping. On the right side neck, the cervical esophagus was isolated in the same way as on the left side and isolated by taping from the left side to the right side. The cervical esophagus was divided using a

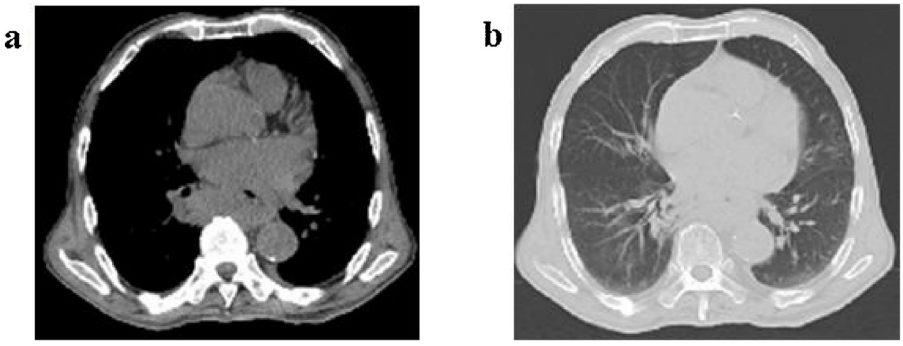

Fig. 3. Computed tomography (CT) at postoperative 3 weeks.
a, CT shows that the lung abscess have decreased compared to preoperative CT.
b, CT shows that infiltrative shadows have disappeared.