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Late Benign Gastrobronchial Fistula after Esophagectomy for Esophageal Cancer: A Case Report

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Abstract

Benign gastrobronchial fistula (GBF) is extremely rare but highly fatal complication of esophagectomy for upper gastrointestinal system cancers. We present a benign GBF after three years esophagectomy for esophageal cancer with presenting recurrent pneumonia. We choose wedge bronchoplasty without lobectomy and primary repair of gastric conduit as an approach.

Keywords: Gastrobronchial Fistula; Esophagectomy; Wedge Bronchoplasty without Lobectomy; Primary Repair of Gastric

Introduction

Upper gastrointestinal tract cancers originating in the esophagus and esophagogastric junction are public health problem especially in Asian countries [1]. It is highly important that surgery is the primary curative treatment for patients with apparently localized and potentially resectable tumors [2]. Gastrobronchial fistula (GBF) secondary to inflammation and stricture 3 years after esophagectomy for the treatment of esophageal cancer is a rare and fatal complication. Therefore, recognition and management are extremely important because of having morbidity and mortality [3-5].

We report a case of benign GBF after three years of esophagectomy for esophageal cancer and its management.

Case report

A 56-year-old man patient was diagnosed with an epidermoid carcinoma of esophagus. After performing staging modalities including CT scans and neck ultrasound sonography (USG), the final diagnosis was clinically T3NoMO esophageal cancer. The low-dose weekly carboplatin plus paclitaxel regimen with radiotherapy (CRT) as used in the Dutch CROSS study was launched. Twelve weeks after finishing neoadjuvant CRT, he underwent esophagectomy with a gastric pull-up. There were no preoperative or postoperative complications. After three years later, the patient was admitted to the hospital due to recurrent and aspiration pneumonia. For this reasons,tomography and bronchoscopy were performed and revealed a fistula from stomach to right main bronchus (Figure 1). Wedge bronchoplasty without lobectomy and primary repair of gastric conduit was performed (Figure 2). Pathological evaluation showed benign lesion (Figure 3). Follow-up of the patient have been continued.

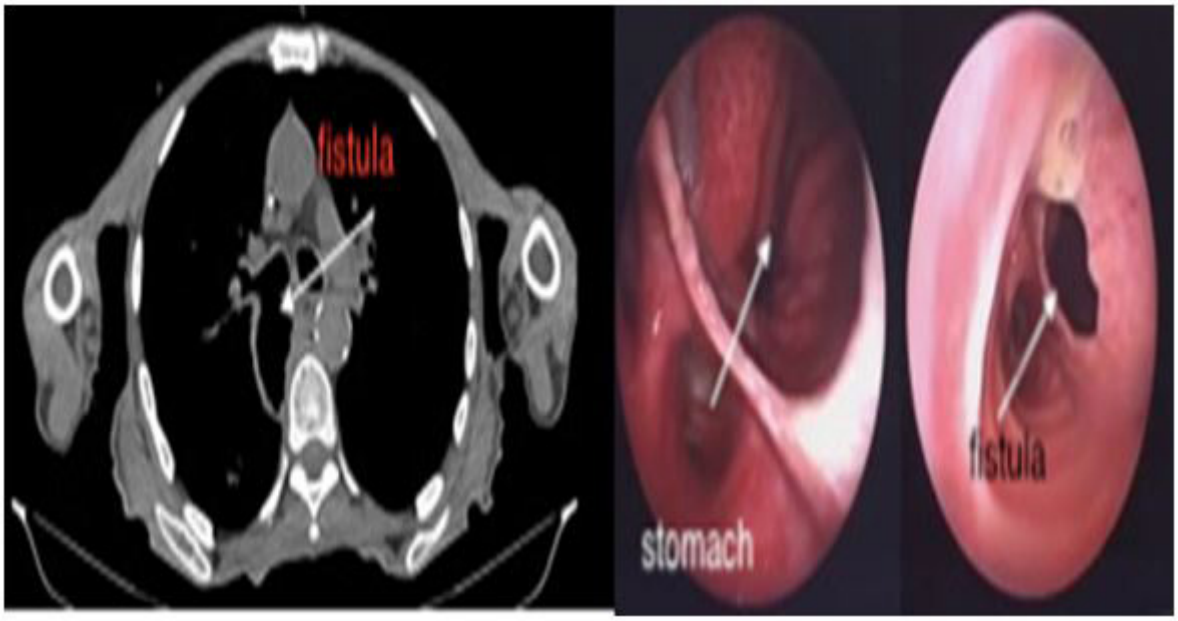

Figure 1: Wedge bronchoplasty without lobectomy and primary repair of gastric conduit was performed

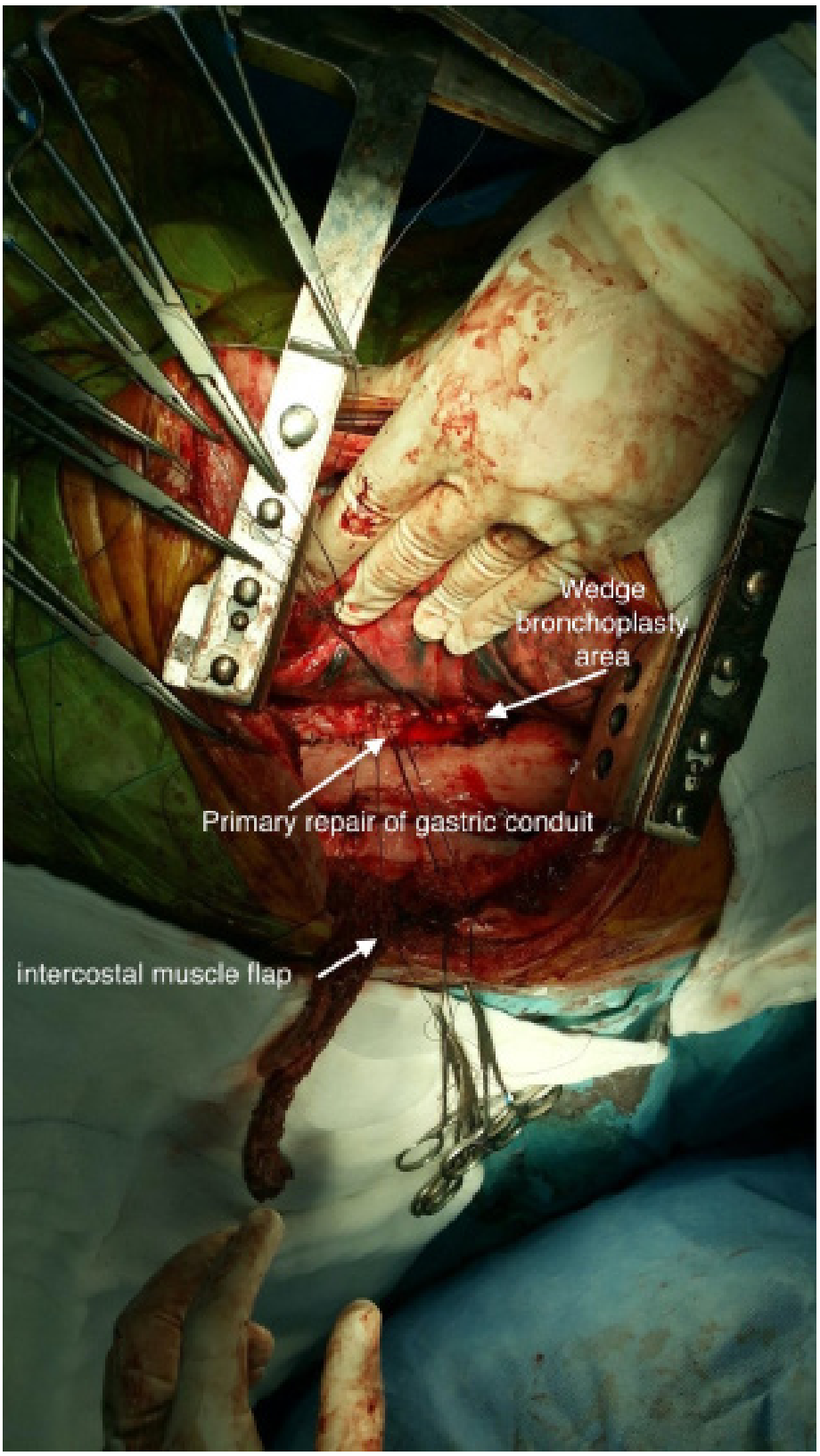

Figure 2: Pathological evaluation showed benign lesion

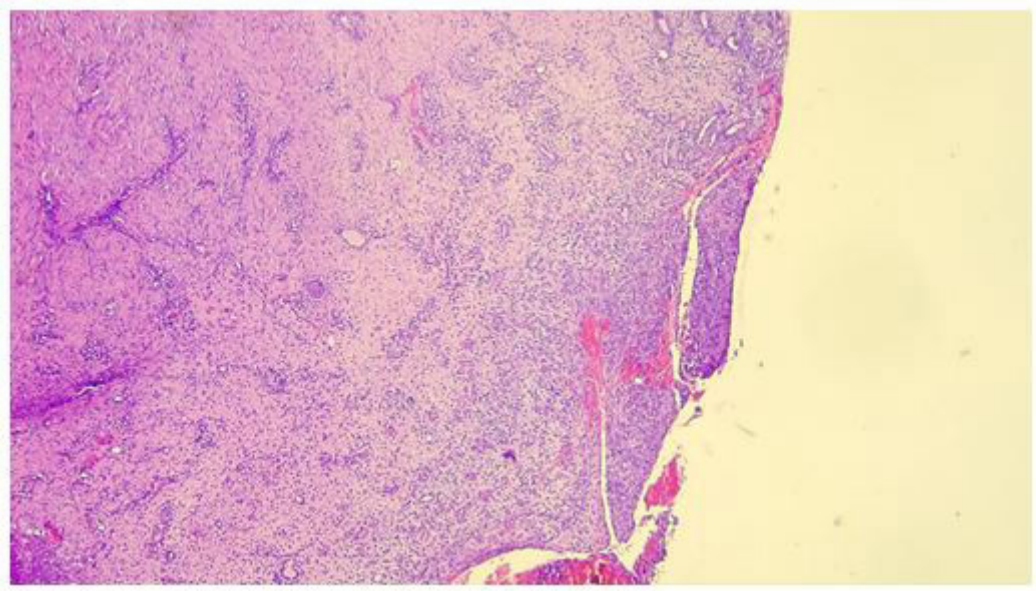

Figure 3: Follow-up of the patient have been continued

In our patient, the first operation was performed with a transhiatal approach and the second operation with a transthoracic approach. The operation period lasted for approximately 5 hours and then 3 red blood cell suspension transfusions were performed. Postoperative adjuvant chemotherapy was completed. PETCT was performed before the second surgery to exclude local or distant metastases, but distant metastases were not observed. Upper gastrointestinal endoscopy was performed before the second operation when gastrobronchial fistula was suspected. Unfortunately, the only thing we know about the pathology after the first surgery is squamous cell esophageal cancer (T3N0M0). The diameter of the gastrobronchial fistula was approximately 12.7mm. Our patient died 26 months after his second operation, due to a cause independent of this disease. We thought that endoscopy treatment would be insufficient for a fistula of this size and in this location.

Discussion

Development of benign gastrobronchial fistula (GBF) after esophagectomy for esophageal cancer represents very rare but extremely fatal with %30 mortality rates [6]. The most common cause, anastomotic leaks, accounts for 40% pf post esophagectomy deaths [7]. The incidence ranges of GBF varies between 0,3 to 1,5% [5,8]. Major reasons of GBF are gastric pull-up necrosis, leakage of anastomosis, ischemia of the bronchial tree, bronchial erosion and iatrogenic surgical injury [8,9]. As result, the most important basic mechanism of these causes is ischemia, inflammation and events that trigger inflammation as in our case major cause predisposed by chemoradiotherapy [10,11].

It is stratified to three categories according to treatments. Type 1 could be treated medically and lifestyle change. Type two could be treated stent and/or drain placement. Type 3 requires surgical treatment [12]. In our case, wedge bronchoplasty and prımary repaır of gastric conduıt was performed for GBF.

GBFs could occur both early after esophagectomy and late during follow-up. Symptoms of GBF range from mild to life-threatening. The patient with GBF presents non-specific symptoms of pneumonia including swallowing, dyspnea and fever. It could be complicated with pulmonary infections, suppurations, septic inflammatory response syndrome (SIRS) [5]. Therefore, it is difficult to diagnose and GBF must be kept in mind if the the patient admitted recurrent attacks of pneumonia to the hospital. In this report, the patient admitted to the hospital with recurrent pneumonia.

Upper GIS tract studies such as CT scan with intravenous contrast and oral contrast administration bronchoscopy, esophagogastroduodenoscopy must be performed the patient with esophageal cancer presenting with aspiration pneumonia [5]. In our case, we performed CT scan and bronchoscopy in order to find the final diagnose and the final diagnosis was GBF.

There are no standardized treatments for benign GBF and it is challenging. The treatment choice depends on clinical status and fistula characteristics. Therefore, patient-tailored management must be choice. The most widespread approach is a resection of direct fistula, closure of the underlying defect with/without vital tissue interposition and reconstruction of the esophagus [7,8]. We chose wedge bronchoplasty and primary repair of gastric conduit approach for type 3 GBF. And also supported with other medications such as antibiotics, nasogastric decompression, feeding with tube.

Conclusion

As a conclusion, GBF after esophagectomy for esophageal cancer is very rare highly fatal. It must be kept in mind in patients with esophagectomy who present with recurrent pneumonia as in our patient.

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