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Case Report

Successful closure of chronic, nonhealing tubercular esophagobronchial fistula with an over-the-scope clip

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Abstract

Esophagobronchial fistula is an uncommon complication of esophageal or mediastinal tuberculosis. A 35-year-old man, a known case of esophageal tuberculosis, who had received 9 months of antitubercular therapy (ATT) presented with persistent cough. He had previously been detected to have an esophagobronchial fistula for which multiple hemoclips had been applied elsewhere, but the fistula persisted. A fistulous communication between the esophagus and the left main bronchus was successfully closed with the help of over-the-scope-clip (OTSC) system. The present case is unique as patient developed fistulous communication during the treatment with ATT and it persisted despite successful treatment of esophageal tuberculosis. Moreover, this refractory fistula could be successfully closed with OTSC.

Key words

Cough, dysphagia, esophagus, fistula, tuberculosis

Introduction

Esophageal tuberculosis is a rare disease accounting for <1% of cases of tuberculosis.[1,2] Most commonly, it occurs due to secondary extension of disease process from the adjacent mediastinal lymph nodes.[1-3] Bronchoesophageal fistula (BEF)/mediastinoesophageal fistula is a rare but potentially serious complication of esophageal/mediastinal tuberculosis.[4-6] Most of the reported cases of BEF/mediastinoesophageal fistula have resolved with antitubercular therapy (ATT) alone. The traditional treatment of BEF has been surgery with few reports of successful closure with conservative management including nasogastric/nasojejunal feeding.[4-6] Various endoscopic options such as hemoclips, fully covered metallic stents, and fibrin glue have also been used for refractory BEF.[7-9] Here, we present a case of posttubercular BEF successfully closed with OTSC after a failed attempt to close it with multiple hemoclips.

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Case Report

A 35-year-old male presented with cough of 18 months duration. His cough used to get worsened with ingestion of liquids and had been treated with oral antibiotics multiple times elsewhere. He was treated for esophageal tuberculosis 2 years ago and had taken 9 months of ATT. His cough started during treatment and endoscopy done elsewhere revealed multiple traction diverticulae in mid-esophagus and a fistulous opening in mid-esophagus. His ATT was continued and a nasojejunal tube was placed for enteral feeding. In spite of these measures, the fistula did not heal. Thereafter, multiple hemoclips were applied to close the fistula elsewhere but the fistula persisted. Upper

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gastrointestinal endoscopy at our center revealed a fistulous opening in mid-esophagus [Figure 1]. Contrast study of the esophagus revealed the presence of a fistulous communication between the esophagus and left bronchus [Figure 2]. No significant mediastinal lymphadenopathy was observed on contrast-enhanced computed tomography. The epithelial lining of the fistulous opening was denuded using Argon plasma coagulation [Figure 3] and using a twin grasper to approximate the edges and withdrawing them into the cap, the fistula was closed using over-the-scope-clip (OTSC) system (Ovesco Endoscopy AG, Tübingen, Germany) [Figure 4]. Contrast study of the esophagus done a week later revealed the presence of OTSC at the fistulous site with no leakage of the contrast [Figure 5]. Thereafter, the patient has been asymptomatic over 6 weeks of follow-up.

Discussion

Esophageal tuberculosis is usually due to secondary involvement of the esophagus from extension of disease process from adjacent mediastinal lymph nodes. Primary involvement is very rare.[1-3] The common presenting symptoms are dysphagia with or without constitutional symptoms. Unusual symptoms such as cough on swallowing liquids due to fistulous communication between the esophagus and respiratory tract and hematemesis due to an aorto-esophageal fistula can be occasionally seen.[1-3]

Fistulous communications with respiratory tract are most commonly due to esophageal malignancy, and benign causes of fistula include tuberculosis, trauma, iatrogenic, corrosive ingestion, poison, and inhalation burns.[4,7] The traditional treatment of BEF has been surgery with few reports of successful closure with conservative management including nasogastric/nasojejunal feeding.[4-6] With advancement in endoscopic therapy, various endoscopic management options have been used in treatment of fistulae including self-expanding metallic stents (SEMS), mechanical closure with through the scope hemoclips, sealants, endoscopic ligation with banding devices, and the recent development of OTSC.[8-12]

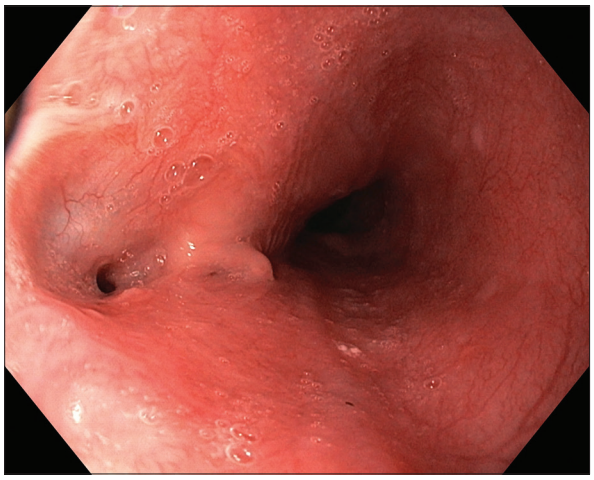

Figure 1: Endoscopy: fistulous opening in mid-esophagus

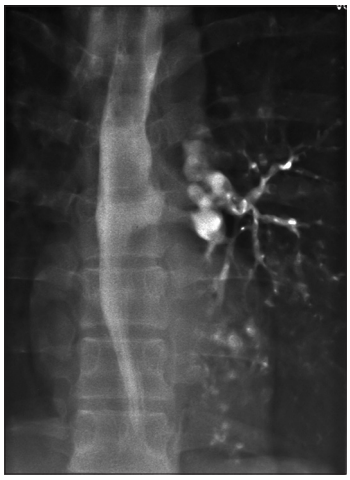

Figure 2: Contrast study reveals fistulous communication between mid-esophagus and left bronchus

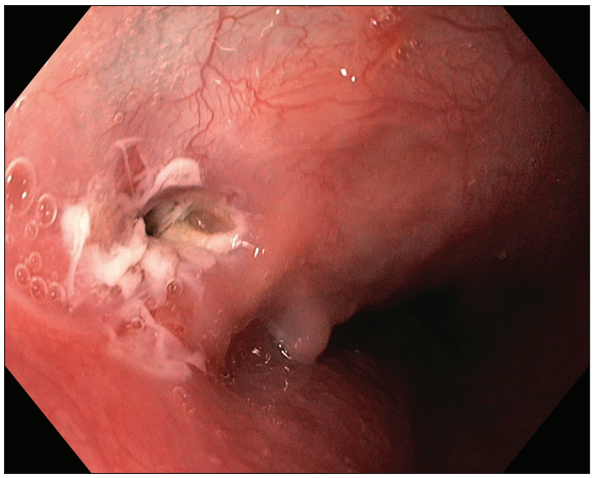

Figure 3: The epithelial lining of the fistulous opening denuded using Argon plasma coagulation

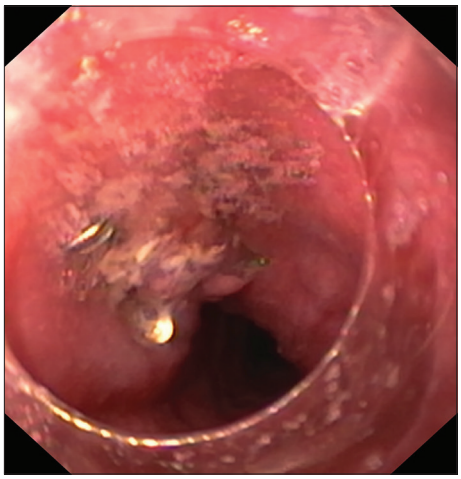

Figure 4: Over-the-scope-clip applied to close the fistula

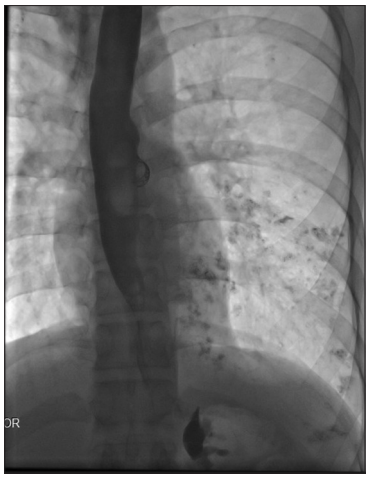

Figure 5: Contrast study reveals closure of the fistula. Over-the-scope-clip is also noted

The OTSC system (Ovesco Endoscopy AG, Tubingen, Germany) is a biocompatible, elastic nitinol endoscopic clip which aims at having better capture of tissue around the leaks/ulcers and therefore has been shown to be effective in management of gastrointestinal perforations, leaks, and bleeding. The present case is unique because it reports the use of a new treatment (OVESCO clip) to close a fistula resulting from tubercular involvement of esophagus which had failed to respond to ATT and placement of hemoclips.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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