Dual aspect endoscopic evidence of tuberculous bronchoesophageal fistula: successful closure from the esophagus

Esophageal involvement of tuberculosis is uncommon and two types have been described [1]. Primary esophageal tuberculosis is rare because of mucosal protection factors, squamous epithelium, peristalsis, saliva, and erect posture. Secondary esophageal tuberculosis is more common and is defined as secondary involvement of the esophagus owing to adjacent pulmonary parenchyma, mediastinal lymph nodes, or vertebral column involvement [2].

The development of bronchoesophageal fistula (BEF) in tuberculosis is related to mediastinal lymph node involvement; inflammation leads to involvement of neighboring structures, particularly the esophagus and the trachea, resulting in periesophageitis and peritracheitis. If, however, caseonecrotic lymph nodes rupture, the local abscess formation results in fistula. The most common symptoms of BEF are cough, dysphagia, fever, and pneumonia [2–4].

Antitubercular therapy (ATT) remains a mainstay of treatment. In cases refractory to ATT, further management, including endoscopic interventions and surgery, are needed [5].
We report the case of a 47-year-old Caucasian woman, admitted due to weight loss, cough, fever, and dysphagia. She previously underwent ileal resection for tuberculosis involvement and was subsequently treated with ATT, remaining symptom-free until the admission. Barium swallow and chest computed tomography revealed evidence of BEF and middle lobe pneumonia (Fig. 1, Fig. 2). The tracheobronchoscopy showed a small anomalous orifice, with a clear passage of mucus, in the medial aspect of the right main stem bronchus. At esophagogastroduodenoscopy, a 1-cm fistula was noted in the middle esophagus. Contrast injection of the esophagus, which leaked into the right bronchus, confirmed the fistula. A 12-mm over-the-scope clip (OTSC; Ovesco, Tübingen, Germany) was placed, and complete fistula closure was confirmed by regular contrast passage through the esophagus without leak (Video 1). The patient started oral intake on the following day with progressive improvement of symptoms. At 1-month follow-up, no clinical or radiological signs of recurrence were recognized (Fig. 3).

Competing interests

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The authors

Marco Bassi1, Marco Ferrari2, Stefania Ghersi1, Vanina Livi1,2, Emanuele Dabizzi1, Rocchi Trisolini1,2, Vincenzo Cennamo1
1 Gastrointestinal and Interventional Endoscopy Unit, Surgical Department, AUSL Bologna, Bologna, Italy
2 Interventional Pulmonology Unit, Cardiothoracic Department, Policlinico Sant’Orsola-Malpighi, Bologna, Italy
3 Interventional Pulmonology Unit, Dipartimento di Scienze Mediche e Chirurgiche, Università Cattolica del Sacro Cuore di Roma, Rome, Italy

Corresponding author

Marco Bassi, MD
Gastrointestinal and Interventional Endoscopy Unit, Surgical Department, AUSL Bologna, Maggiore Hospital, Largo Nigrisoli 2, 40139 Bologna, Italy
Fax: +39-051-6478145
m.bassi@ausl.bologna.it

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