

# Tracheoesophageal Fistula, A Rare Sequela of Multidrug Resistant Pulmonary Tuberculosis

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**Abstract:** *Tracheoesophageal fistula (TEF) is a rare sequela of multidrug resistant pulmonary tuberculosis. It is a type of acquired TEF defined as a pathological connection between the trachea and the oesophagus. This article reports a case of a 42 year old male patient presenting with complaints of breathlessness on exertion since 2 years, increased since 1 month, cough with expectoration since 1 month, worsening on consumption of fluids and dysphagia. The patient was diagnosed with a defect on both bronchoscopy and upper GI-scopy. He was subsequently treated with double stenting. Significance of the article: The significance of this article lies in its documentation of a rare sequela of multidrug resistant pulmonary tuberculosis, thereby providing valuable insight to clinicians in diagnosing and managing similar cases. It emphasizes the need for timely detection because if left untreated TEF can lead to serious complications. Purpose of the article: To highlight the importance of proper investigation and management of acquired tracheoesophageal fistula.*

**Keywords:** tracheoesophageal fistula, multidrug resistant tuberculosis, case report, double stenting, dysphagia

## 1. Introduction

Acquired tracheoesophageal fistula (TEF) is defined as a pathological connection between the trachea and the esophagus that results from a spectrum of disease processes. The major causes of acquired non-malignant TEF include postintubation injury, chronic infections (e.g., tuberculosis), radiation injury, and post-surgical trauma. TEF is a rare consequence of tuberculosis. The pathogenesis of aerodigestive fistula is usually an extension of a tubercular lesion from lungs, mediastinal lymph nodes, or vertebra into the esophagus rather than primary esophageal tuberculosis.

## 2. Case Report

A 42 year old thin built male patient had come to OPD with complaints of breathlessness on exertion since 2 years increased since 1 month, cough with expectoration since 1 month worsening on consumption of oral fluids, loss of weight around 5-10 kgs over 1 month and dysphagia to oral fluids more than solids since 1 month. Patient was a case of rifampicin resistant sputum positive pulmonary tuberculosis 3 years back for which he took second line AKT for a period of 12 months. He had no history of trauma, mechanical ventilation, or malignancy. Patient did not have any comorbidities or addictions, past or present.

### Clinical course

On examination the patient was conscious, oriented with vital signs within normal limits. On percussion dull note was appreciated over right hemithorax and on auscultation bronchial breath sounds were heard on the right side with bilateral wheeze. Chest Xray showed right sided volume loss with ipsilateral mediastinal shift. CECT (contrast enhanced computed tomography) chest was suggestive of a communication between the esophagus and the right upper

lobe bronchus, likely right sided broncho-esophageal fistula with near complete collapse of right lung following fibrocavitary disease. Patient was subjected to bronchoscopy which revealed a deficit just next to the carina in right main bronchus, and upper GI scopy which showed a lesion in the esophagus, 20 cm from incisors. He was treated with double stenting, one in the esophagus and one in the right main bronchus.



Chest Xray (PAview)



CECT chest showing TEF

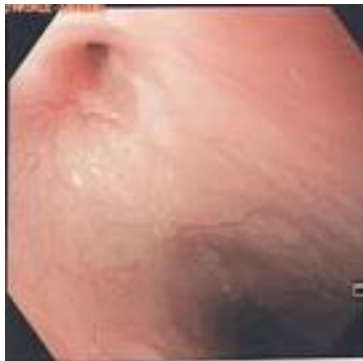
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Bronchoscopic image showing TEF



Upper GI scopic image showing TEF

### 3. Conclusion

Acquired TEF secondary to tuberculosis is insidious and needs a thorough investigative approach. Timely detection of acquired tracheoesophageal fistula as a post TB sequela is of paramount importance as it can cause serious complications if left untreated. Early diagnosis and appropriate management are extremely beneficial for the patient.

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