

**Clinical Image**

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## Placement of a metallic Y stent to address a large tracheoesophageal fistula on the carina

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**Abstract**

We report a case of a 43-year-old woman who presented with a large tracheoesophageal fistula involving the main carina after chemo-radiotherapy for lung adenocarcinoma. A self-expanding fully covered metallic Y stent was placed with the use of both rigid and flexible bronchoscopy and fluoroscopic guidance. An esophageal stent was placed subsequently. The patient survived 8 months without relevant symptoms.

**Keywords:** tracheoesophageal fistula; metallic stent; esophageal stent; lung cancer.

**Description**

Tracheoesophageal fistulae represent a severe complication of lung cancer and result in significant morbidity, while severely affecting patient's quality of life.

A 43 year old woman presented with a right upper lobe adenocarcinoma and extensive mediastinal adenopathy. After chemotherapy with Cisplatin and Paclitaxel combined with Radiotherapy she continued on maintenance treatment with Durvalumab. However she gradually developed dysphagia, cough after swallowing and recurrent chest infections. A CT of the thorax revealed the presence of a large tracheoesophageal fistula at the level of the carina. It was confirmed both by bronchoscopy and esophagoscopy. Placement of a self expanding fully covered metallic Y stent was selected. Rigid bronchoscopy under general anesthesia secured the airway and ventilation. Under fluoroscopic guidance and flexible bronchoscopy two guidewires were advanced at the left and right bronchial tree respectively. The Y stent was then deployed over the guidewires, its position checked and the patient awakened and successfully extubated. An esophageal stent was placed the following day under sedation with esophagoscopy.

Representative CT and endoscopic images before and after the stents placement are shown in pictures.

The patient was relieved from symptoms and resumed oral intake without complications. Last follow up bronchoscopy 7 months later confirmed stent patency. Small granulomas on the stent edges were treated by cryotherapy. The patient succumbed to metastatic disease a month later.

Stenting is necessary as palliative treatment in cases of malignant tracheoesophageal fistulae to improve quality of life and prolong survival. Double stenting of both esophagus and airway is preferred as it has been shown to offer better results. Even if there is not airway stenosis, this complication may occur very soon as a result of the malignant process, or compression by the esophageal stent itself. Therefore airway stenting should be ideally performed before or concurrently with esophageal stenting.

Metallic airway stents offer advantages over silicone stents for malignant tracheoesophageal fistulae: they are more easily placed and conform better to the airway wall with much less risk of migration. Being fully covered they do not allow spillage

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of esophageal contents through the stent. Malignant or granu-  
lomatous ingrowth at the edges can be managed endoscopical-  
ly. Risk of stent fracture and difficulty in removing, both disad-  
vantages of metallic stents, are rarely an issue due to restricted  
patient survival. If however prolonged survival is anticipated,  
then a silicone airway stent should be equally considered.

### References

1. Freitag L, Tekolf E, Steveling H, et al. Management of Esoph-  
agotracheal Fistulas With Airway Stenting and Double Stenting.  
*Chest.* 1996; 110: 1155-1160.
2. Ke M, Wu X, Zeng J. The Treatment Strategy for Tracheoesopha-  
geal Fistula. *J Thorac Dis.* 2015; 7: S389-S397.
3. Zhou C, Hu Y, Xiao Y, Yin W. Current Treatment of Tracheoesoph-  
ageal Fistula. *Ther Adv Respir Dis.* 2017; 11: 173-180.
4. Khan A, Hashim Z, Neyaz Z, et al. Dual Airway and Esophageal  
Stenting in Advanced Esophageal Cancer With Lesions Near Ca-  
rina. *J Bronchol Intervent Pulmonol.* 2020; 27: 286-293.

