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.

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
of esophageal contents through the stent. Malignant or granulomatous ingrowth at the edges can be managed endoscopically. Risk of stent fracture and difficulty in removing, both disadvantages 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