

“One tube two ways” technique in tracheoesophageal fistula: esophageal metal stent removal and tracheal Y silicone stent placement in a rigid bronchoscopy procedure

Hang Xu, Shi-yue Li, Yu Chen*

GuangZhou Medical University First Affiliated Hospital/Guangzhou Institute of Respiratory Health/ National Center of Respiratory Medicine, Guangzhou, CHINA

Objective:

To evaluate the curative effect of removing esophageal metal stent and placing Y silicone stent by a rigid bronchoscopy to treat the tracheoesophageal fistula caused by metal stent placement for esophageal cancer.

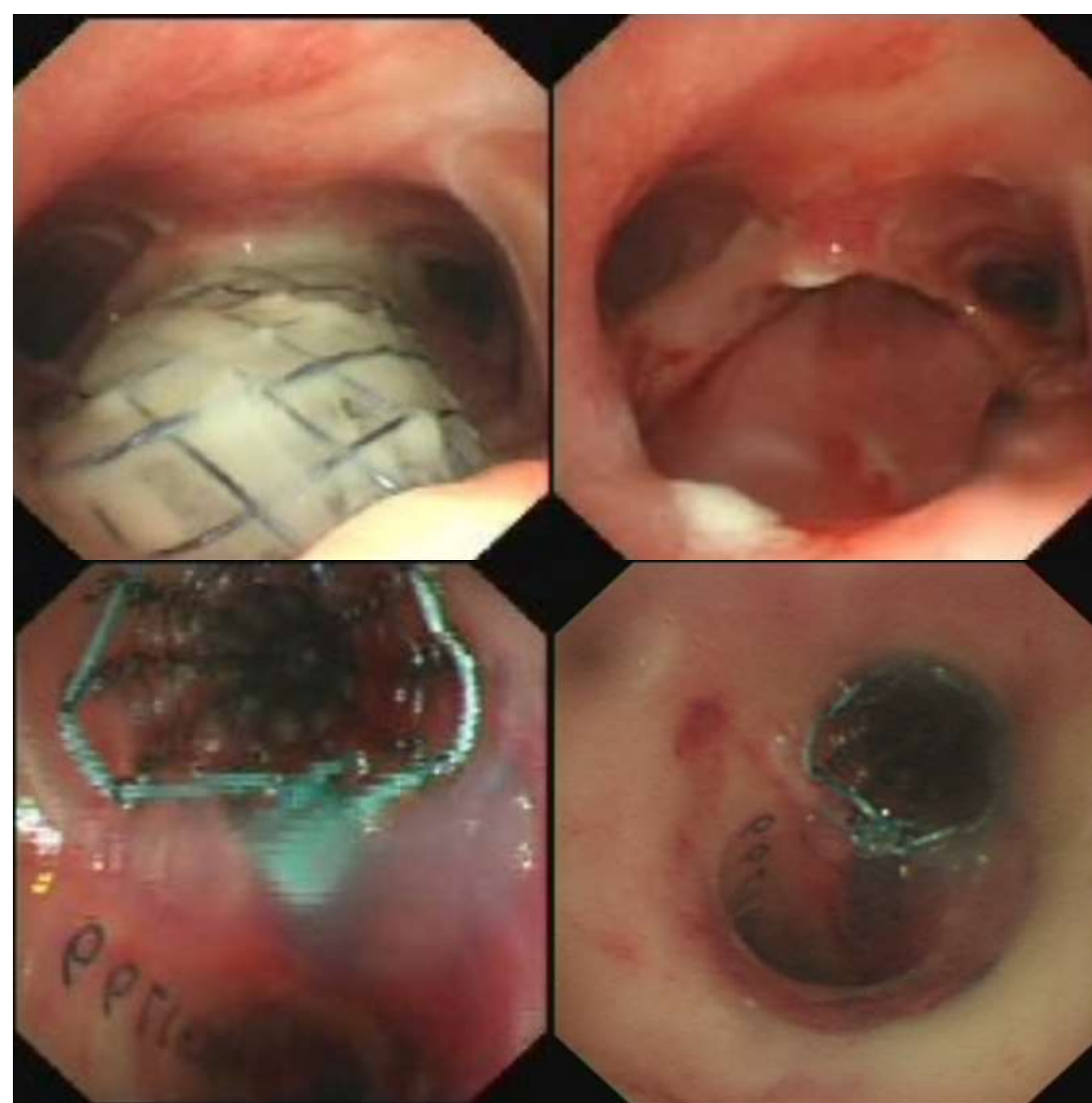
Methods:

Participants: Patients who were diagnosed with esophageal cancer and tracheoesophageal fistula in our department from January 2018 to May 2021.

Remove the esophageal metal stent: Under general anesthesia and muscle relaxation, ventilation is maintained by chest tube; Insert the 14 mm rigid bronchoscopy to the esophagus 2 cm per step guided by balloon, which half in rigid bronchoscopy and half in the esophagus and dilated from 12~14 mm; The incarcerated oversized metal stent were gripped, twisted and pulled by rigid forceps.

Insert the Y silicone stent: remove the chest tube and replace the 14 mm rigid bronchoscopy. According to the characters location, size, number, and diameter of the fistula, to cut and place the Y silicone stent at the bedside.

Reexamination of bronchoscopy after operation, regular outpatient follow-up and chest CT.



1. airway before stent removed 2. airway after stent removed
3-4.hybrid stent for fistula

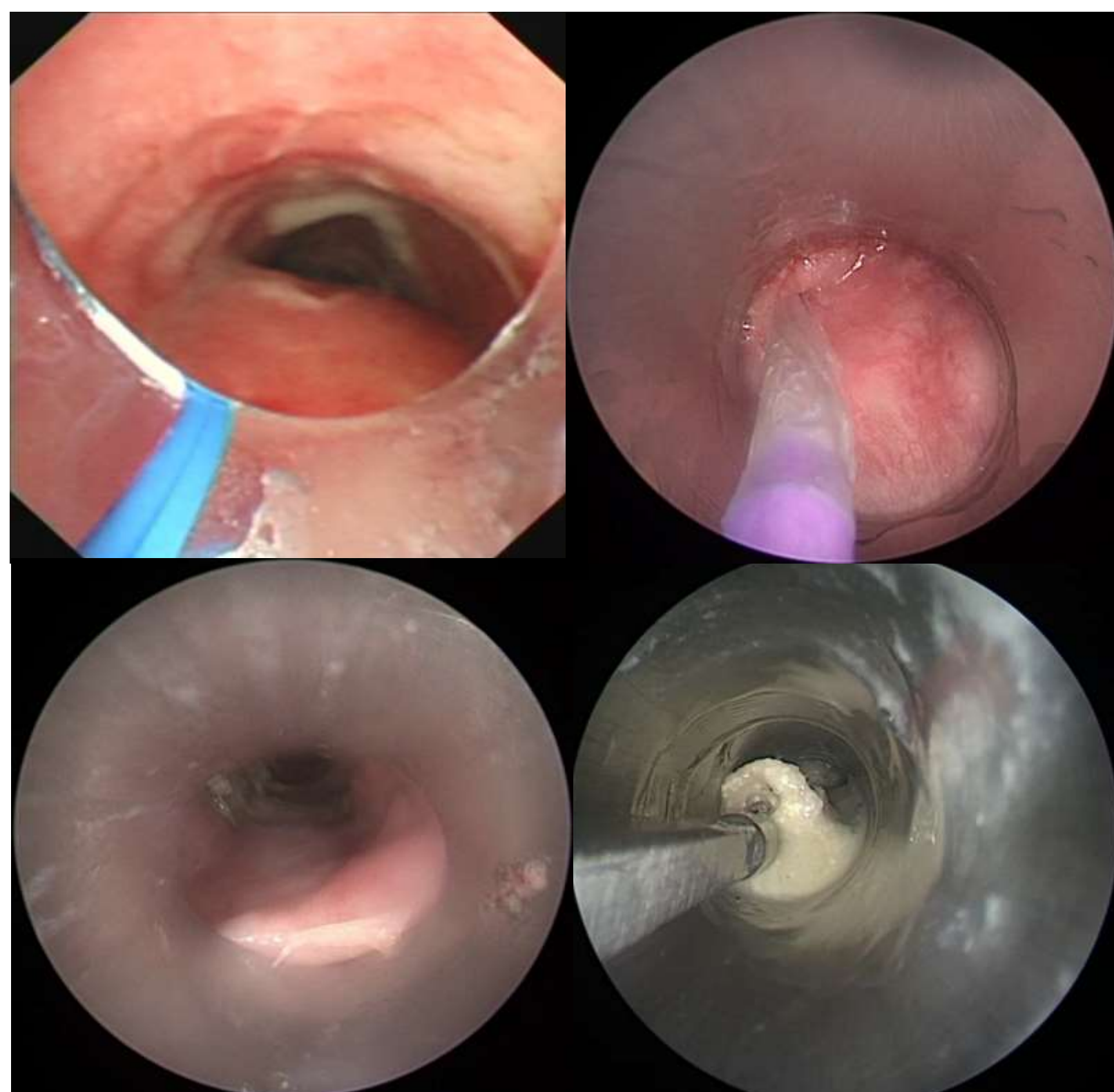
Results:

15 patients were enrolled, 12 males and 3 females. All cases completed the planned bronchoscopy operation and successfully resuscitated the extubation under general anesthesia.

Dyspnea and airway obstruction were relieved in all cases immediately after operation, the fistulas were completely closed/covered, no significant reflux. During the follow-up period, no significant migration; airway obstruction due to tumor proliferation has been founded in 4 patients who require interventional treatment to maintain the curative effect; Only little granulation tissue hyperplasia were founded in 6 patients. No death or immediate complications related to stent or interventional operation.

Conclusion:

Esophageal metal stent removal and tracheal Y silicone stent placement in a rigid bronchoscopy procedure for tracheoesophageal fistula caused by esophageal metal stent is safe and effective, and more convenient compared with traditional surgery operation.



1. tracheal intubation 2. eosphagus dilation by balloon
3.Rigid bronchoscopy in eosphagus 4.remove metallic stent in eosphagus