Fistula between the airway and gastric conduit is a rare and highly morbid complication after esophagectomy. Effective treatment of these fistulas hinges on the prevention of aspiration, which is usually the determining factor in the quality and length of life for these patients. Li and colleagues describe an innovative way of treating gastrotracheal and gastrobronchial fistulas with a combined-type, Y-shaped covered metallic stent placed on the airway side of the fistula. As a result, they report resolution of aspiration symptoms in all 10 patients who were treated over a period of 4 years.

This work presents us with an opportunity to think outside the box in the complex field of endoluminal airway interventions. Y-stents in the airway are mainly delivered by rigid bronchoscopy and a variety of deployment mechanisms, some commercially available and others homemade. Despite multiple refinements, these stents remain notoriously difficult to position. Han and colleagues eliminated the rigid bronchoscope from this procedure and instead solely relied on per-oral delivery guided by angiography. Another innovation of this technique is the hybrid deployment mechanism, which uses a combination of push technique and string unraveling to accurately position the stent with minimal movement during deployment. Two important nuances should be noted. First, these stents are custom-made according to the length and location of the fistula. Second, the authors routinely place 2 stents, with 1 limb of the smaller Y-stent projecting through another limb of the larger Y-stent, effectively sealing the entire airway from the distal trachea down to the bifurcation of the left-sided carina for left-sided fistulas, or the bronchus intermedius for right-sided fistulas. This Y-en-Y technique using perfectly fitted stents is likely what caused the excellent outcomes that are reported in this series.

Despite this progressive work, tracheoesophageal fistula is a complex problem, and Y-en-Y airway stents present an encouraging first step toward an effective solution. To us, the deployment mechanism described is quite challenging, and its success depends on the expertise gained by repetitive practice at a high-volume center. Furthermore, the effect of this technique on patient quality of life is still not clear. Although the authors report a complete resolution of coughing while eating, we note that it took most patients more than 2 weeks after stent insertion to actually resume any form of oral diet, and that nutrition was routinely being delivered through enteral feeding tubes. In addition, because these data were collected retrospectively, they are subject to a significant amount of recall bias, especially in patients who experience multiple symptoms related to recurrence of esophageal cancer. Lastly, because no formal quality of life assessment was undertaken, it is difficult to determine whether these stents are associated side effects, such as chest pain, dyspnea, or airway obstruction, that outweigh their benefits.

Reference