

Editor's Note: Authors are invited to respond to Correspondence that cites their previously published work. Those responses appear after the related letter. In cases where there is no response, the author of the original article declined to respond or did not reply to our invitation.

Bronchopleural Fistula Cured by Customized Airway Metallic Stent



To the Editor:

We read with great interest the important article by Avasarala et al.¹ They have done a great job to review the application of metallic endobronchial stents in airway disease. They addressed the contemporary indications including tracheoesophageal fistula, tracheomediastinal fistula, relapsing polychondritis, excessive dynamic airway collapse, lung transplantation (airway dehiscence and lobar stenting), benign airway stenosis, and tracheobronchial injury. However, a challenge disease, bronchopleural fistula (BPF) or bronchial stump fistula (BSF), has been neglected.

BPF or BSF is a severe and life-threatening complication after pneumonectomy or lobectomy. In 2006, we first report the application of a bullet-shaped, angled stent (Han's stent) for BSF, and 83.33% patients get permanent closure.² Subsequently, we successfully placement customized airway metallic stent in 148 patients with BPF or BSF.³ Symptom relief was achieved in 141 patients at 30 days' follow-up after stenting. The stent we used included a Y-shaped self-expandable covered metallic stent with a bullet head, hinged self-expandable covered metallic stent with a bullet head, L-shaped self-expandable covered metallic stent, Y-shaped self-expandable covered metallic stent, and a hinged self-expandable covered metallic stent.

As we illustrated, metallic stent placement plays an important role in BPF or BSF, as does a customized airway metallic stent.

Yahua Li, PhD
Xueliang Zhou, PhD
Kewei Ren, MD, PhD
Jianzhuang Ren, MD, PhD
Xinwei Han, MD, PhD
Henan, China

AFFILIATIONS: From the Department of Interventional Radiology, The First Affiliated Hospital of Zhengzhou University, Zhengzhou.

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CORRESPONDENCE TO: Xinwei Han, MD, PhD, Department of Interventional Radiology, The First Affiliated Hospital of Zhengzhou University, Zhengzhou 450052, Henan, China; e-mail: fcchanxw@zzu.edu.cn

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References

1. Avasarala SK, Freitag L, Mehta AC. Metallic endobronchial stents: a contemporary resurrection. *Chest*. 2019;155(6):1246-1259.
2. Han X, Wu G, Li Y, et al. A novel approach: treatment of bronchial stump fistula with a plugged, bullet-shaped, angled stent. *Ann Thorac Surg*. 2006;81(5):1867-1871.
3. Han X, Yin M, Li L, et al. Customized airway stenting for bronchopleural fistula after pulmonary resection by interventional technique: single-center study of 148 consecutive patients. *Surg Endosc*. 2018;32(10):4116-4124.

Response



To the Editor:

We are appreciative of the feedback and response from Li et al regarding our manuscript. Bronchopleural fistulas are an important entity, with significant clinical implications, including a high mortality rate.¹

The Han's Closure Stent has been used to effectively manage bronchopleural fistulas. This stent has been available since 2003. As with most of the stents in our review article, its frame is constructed from nitinol wire. Based on the data presented by Han et al, the authors had good success with fistula closure and elimination of a contaminated pleural space. Limitations of the original study include its small sample size (n = 6); the larger followup study showed promising results amongst 148 patients.²

Although the current data on the Han's Closure Stent is positive, our intent was to provide a comprehensive review of metallic stents that are widely available on the global market. The Han's Closure Stent appears to be custom made, posing difficulty for wide applicability. Another stent that may be useful in the same scenario is the Carina-J-Stent from Micro-Tech. It is not a custom-manufactured stent and is available directly from the manufacturer.³ This stent is mentioned in our review paper.