Metal Stenting as First-Line Therapy for Tracheal Compression After Gastric Pull-up

To the Editor:

I read with interest the report on the treatment of tracheal compression due to a gastric pull-up by Kim et al (March 2002). The patient was treated with metal stenting for this condition, with improvement as expected.

However, I am somewhat puzzled about the metal stent as a first-line treatment. As stated in the report, metal stents have significant potential for complications, especially in patients with a long life expectancy, as is the case in most benign obstructive airway disorders. Many of these complications are easily dealt with, but some can lead to disabling morbidity.

No mention is made in the report about alternative options such as silicone stenting or surgical correction.

The stent manufacturer, as well as many interventional pulmonologists, recommends to use only metal stents in benign disease if all other options have failed. By description, the patient in the study by Kim et al could have been a candidate for other interventions. If this is the case, it would have been necessary to inform the patient about the “off-label” use of the stent as well as about alternative options, such as stenting with a silicone endoprosthesis.

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To the Editor:

We thank Dr. Ernst for his letter and would like to elaborate on our decision to place a metal stent in the patient described in our case report. First, the patient’s presentation was the second for tracheal compression associated with respiratory failure. She required a tracheostomy with prolonged ventilator support for the same indication after her gastric pull-up procedure. Second, after consultation with surgeons, there was no simple surgical intervention to separate the malacic trachea from the intrathoracic stomach. Third, the patient had a long tracheal lesion requiring the placement of two 16 × 60-mm overlapping stents. We believed that a silicone stent of this length would lead to problems with poor mucociliary clearance and inspissated mucus. Finally, we have had excellent experience with the metal Wallstents (Pfizer; New York, NY) used in this patient.

Expandable stents such as the Wallstent have advantages over silicone stents. It is believed that metal stents become epithelialized, resulting in greater mucociliary clearance compared to silicone stents. As Dr. Ernst pointed out in his letter, there are many potential problems associated with the use of metal stents. Gianturco (Cook Inc.; Bloomington, IN) stents have been associated with perforation of the tracheobronchial tree and hemorrhage. Our group has had problems with deformation and migration of metal Palmaz (Johnson & Johnson Interventional Systems; Warren, NJ) stents in the tracheobronchial tree. However, we have had excellent long-term outcomes with Wallstents. For example, in a long-term follow-up of two patients with relapsing polychondritis who received tracheal and bilateral mainstem bronchial Wallstents, both have stable obstruction on pulmonary function testing and dynamic CT scanning and are free from dyspnea 66 months and 32 months, respectively, after stent placement.

Our patient had recurrent and life-threatening tracheal obstruction not amenable to surgical correction. We chose the metal Wallstent because she required long-term stenting and because of our excellent experience with this stent in the large airways. She remains asymptomatic and free of complications 38 months after stent placement.

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