Commentary: The role of gastroesophageal reflux in patients with acquired tracheal stenosis

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Gastroesophageal reflux (GERD) has been associated with several pulmonary and airway pathologies, including asthma, subglottic stenosis, pulmonary fibrosis, and bronchiolitis obliterans in patients who had a lung transplantation. Surgical treatment of GERD improves survival in patients with pulmonary fibrosis, improves lung allograft function, and decreases the need for steroids in patients with asthma. Idiopathic tracheal stenosis appears to be associated with GERD, and the treatment of GERD might improve outcomes. The association of GERD with acquired laryngotracheal stenosis is less clear, but some have suggested that addressing reflux in these patients might improve the management of the stenosis.

In the current issue of *The Journal of Thoracic and Cardiovascular Surgery*, Bianchi and colleagues describe their experience with patients with complex laryngotracheal stenosis and GERD. There were 124 eligible patients for the study, most with postintubation stenosis. An abnormal pH study was found in 52 patients. The authors performed a fundoplication for reflux in 20 patients and medical therapy in 32. Patients without reflux (n = 72) served as the control group. Patients with tracheal stenosis, who had a fundoplication, had outcomes similar to patients without reflux. However, patients treated with medical therapy had significantly worse outcomes. The differences in outcomes held after propensity matching of the groups.

The results from Bianchi and colleagues are exciting and might lead to more widespread testing for reflux in patients with acquired laryngotracheal stenosis. However, the interpretation of the results merits some caution. Laryngopharyngeal reflux (LPR), is the likely culprit of the association of reflux and tracheopulmonary diseases and the authors could only infer LPR from the method used for pH testing. LPR is better detected with impedance testing and still benefit from an antireflux procedure. It is possible that more patients in the study by Bianchi and colleagues had LPR and might have benefited from fundoplication. The authors were also quite conservative in indicating fundoplication. Only patients with a DeMeester score above 30, with body mass index less than 30, and without significant comorbidities had fundoplication. As a consequence, the medical therapy group likely included sicker patients with significant GERD. Finally, the number of patients used for comparisons was small, and in the comparisons after propensity matching there were only 18 patients in the fundoplication group.

Despite some shortcomings such as the small sample size and a high likelihood that the authors did not detect LPR in all patients, the study from Bianchi and colleagues is important and might change current medical practice. Testing for reflux should be used more liberally in patients with laryngotracheal stenosis, and perhaps those with proven reflux or LPR should undergo fundoplication rather than medical therapy. Some of these patients might be good candidates for less invasive procedures such as endoscopic fundoplication, or magnetic sphincter augmentation with Linx (Torax, North Shoreview, MN). More studies using impedance testing and detection of LPR will be needed to further clarify the association of reflux and acquired tracheal stenosis.
References