A 49-year-old man with a history of coronary artery disease presented to pulmonary clinic with a progressive chronic cough that started 1 year previously, associated with scant hemoptysis and recent onset dyspnea on exertion. He denied smoking, fevers, night sweats, and weight loss. Results of the physical examination were unremarkable. Chest computed tomography (Figure 1) showed a large longitudinal filling tracheal defect. Follow-up bronchoscopy revealed several large wart-like nodular lesions on the vocal cords and in the trachea (Figure 2), causing severe tracheal narrowing. The lesions were removed with electrocautery and snare to ensure near complete patency of trachea. Pathology results of the tracheal lesions returned with squamous papilloma positive for human papilloma virus (HPV)-6 and 11, consistent with a diagnosis of diffuse laryngotracheal papillomatosis (LTP).

Diffuse LTP is the benign, neoplastic, papillomatous epithelial growth caused by HPV infection, most commonly HPV-6 and 11. Symptoms depend on the severity of the papillomas and include cough, dyspnea, voice change, and—rarely—stridor or upper-airway obstruction.1-3 The diagnosis is made via direct visualization and biopsy.1,2 Unfortunately, the disease has a chronic course of recurrent papillomas.

The primary treatment is endobronchial debulking and debridement via bronchoscopy, including microdebrider, electrocautery, argon plasma coagulation, and cryotherapy. The use of laser therapy has diminished owing to the concern for HPV transmission via the vapor plume.2,3 Recent advances in medical therapies for tracheal papillomatosis include HPV vaccination, cidofovir, and bevacizumab, with studies showing decreased tumor burden and increased intervals between therapeutic procedures after treatment4,5 (Supplemental Figures 1 and 2, available online at http://www.mayoclinicproceedings.org).
SUPPLEMENTAL ONLINE MATERIAL
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FIGURE 2. Bronchoscopic visualization of large, nodular papillomas on the vocal cords (A) and throughout the trachea (B), causing significant obstruction.