the 1-year survival advantage of IPF relative to PCD did not reach statistical significance (hazard ratio = 0.48; 95% confidence interval [0.21, 1.06] \( p = 0.069 \)). IPF, CF, and COPD did not have significantly different 1-year survival compared with KS (\( p = 0.559 \), \( p = 0.358 \), and \( p = 0.388 \)). Pairwise comparisons between PCD and KS found no statistically significant differences in 1-year (\( p = 0.566 \)) or overall (\( p = 0.664 \)) post-LTx survival.

Using a national registry, we report survival outcomes for a larger group of patients with the rare disorders of PCD and KS. An important limitation with this analysis is selection bias related to the decision process for cases that were listed or denied. Although the overall rate of LTx is increasing in the United States,\(^5\) there has not been a similar trend in the larger group of patients with the rare disorders of PCD and KS. An important limitation with this analysis is selection bias relative to the decision process for cases that were listed or denied. Although the overall rate of LTx is increasing in the United States,\(^5\) there has not been a similar trend in the

Pairwise comparisons between PCD and KS found no evidence for increased 1-year mortality after LTx in PCD similar to the general LTx population. Therefore, the limited long-term LTx outcomes for both patient populations are consistent with the data set, available data demonstrate that long-term LTx outcomes for both patient populations are similar to the general LTx population. Therefore, the limited evidence for increased 1-year mortality after LTx in PCD is insufficient to discourage LTx in PCD or KS.

**Disclosure statement**

None of the authors has a financial relationship with a commercial entity that has an interest in the subject of the presented manuscript or other conflicts of interest to disclose.

**Biodegradable stent for vanishing bronchus syndrome after lung transplantation**

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We report the case of a 68-year-old female with history of pulmonary fibrosis who had undergone a right single lung transplant 18 months previously. The patient had *Klebsiella pneumonia* immediately after transplantation, and was on mechanical ventilation for a total of 2 weeks after surgery.

During the next 3 months, she evolved with chronic cough and dyspnea on exertion. Spirometry showed a forced expiratory volume in 1 second (FEV\(_1\)) of 45% of predicted. Bronchoscopic examination demonstrated an open anastomosis with a combined stenosis and malacia of the bronchus intermedius (BI). Argon plasma coagulation and serial balloon dilation were performed. Initially, her symptoms improved, but worsened again 2 weeks later. Transbronchial biopsies showed no evidence of acute rejection. Follow-up bronchoscopy visualized the same airway narrowing at the BI. No cartilage structure could be identified, and sub-mucosal thickening of the BI was noticed.

The same bronchoscopic treatment was performed 3 times every 2 weeks, but recurrence was noted. Findings were consistent with “vanishing bronchus syndrome.”

After the third recurrence, a fully covered auto-expandable hybrid stent (AERO stent; Merit Endotek, South Jordan, UT) was placed and symptoms improved significantly, but extensive granulation tissue developed and the stent was removed 1 month later. Subsequently, a silicone stent was used, but it migrated after 3 weeks. The patient continued to have dyspnea, cough and narrowed BI.

We made the decision to place a biodegradable 10 × 22-mm stent (ELLA-CS, Ltd., Hradec Kralove, Czech Republic). This is a self-expandable stent made of polydioxanone, a polymer in the polyester family.\(^1\) Follow-up bronchoscopies demonstrated sequential degradation of the stent during the next 6 months (Figure 1A–D). No granulation tissue developed. Malacia improved from severe to moderate. Narrowing improved from 80% to 40%, and FEV\(_1\) from 45% to 68% of predicted. Clinically, the patient referred no exertional dyspnea, and mild cough. There has been no need for any airway intervention for the last 4 months.

The data reported here have been supplied by the United Network for Organ Sharing as the contractor for the Organ Procurement and Transplantation Network. The interpretation and reporting of these data are the responsibility of the authors and in no way should be seen as an official policy of or interpretation by the Organ Procurement and Transplantation Network or the U.S. Government.

**References**


Vanishing bronchus intermedius syndrome is a late complication after lung transplant. This type of stenosis is not related to ischemia and proposed pathogeneses include alloreactive injury, infection and others.\(^2\) Treatment of this complication includes balloon dilation and/or thermoablative techniques (YAG laser, argon plasma coagulation, electrocautery), with success rates of 50% to 60%. For recurrent stenosis after dilation, a stent insertion is necessary.\(^3\) Several stents have been developed and, currently, silicone and fully covered removable metallic stents are used most frequently. Adverse events of these procedures include bleeding, airway perforation, granulation tissue formation, mucus plugging, infection or stent displacement after implantation.\(^4\)

Very few reports on airway biodegradable stents are available in the literature. The auto-expandable stent reported herein has high biocompatibility, similar to absorbable suture material.\(^1\) Lischke et al evaluated the safety of this procedure in 6 patients with bronchial stenosis. After 4-year follow-up, 5 of 6 patients reported good clinical condition and no complications after stent implantation.\(^5\) No randomized, controlled trials have been performed regarding this stenting approach.

In conclusion, the use of an airway biodegradable stent seems to be an effective and safe alternative in patients with recurrent stenosis and no success with traditional stent placement.

**Disclosure statement**

The authors have no conflicts of interest to disclose.

**References**
