Endobronchial mucosal blanching due to a post-lung transplantation pulmonary artery stenosis

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Received 5 July 2010; received in revised form 7 October 2010; accepted 14 October 2010; Available online 3 December 2010

Abstract

A 45-year-old woman underwent a bronchoscopy shortly after lung transplantation. The airway mucosal appearance significantly differed between both lungs, with a pale aspect of the left bronchial tree. Computed tomography (CT) and perfusion scan confirmed a left pulmonary artery stenosis, improving with conservative treatment.

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Keywords: Lung transplantation; Anastomosis; Vascular stenosis; Pulmonary artery

1. Case

A 45-year-old woman underwent a bronchoscopy to evaluate a lower oxygen saturation and increased dyspnea 3 months after a bilateral lung transplantation because of lung fibrosis. During the bronchoscopy, we noticed that the mucosal appearance significantly differed between the right and left lung, with blanching of the entire left main bronchial tree (Fig. 1(A) and (B)). Both bronchial anastomosis were perfect and no airway stenosis could be observed.

A left pulmonary artery (PA) stenosis was confirmed by perfusion scanning and a contrast-enhanced chest CT showing

Fig. 1. Bronchoscopic view of the airway mucosa of the right middle lobe (A) and of the left lower lobe (B).
a 70% stenosis of the anastomosis (Fig. 2(A) and (B)). When reviewing the patients’ medical charts, it appeared that during the transplantation procedure, the surgeon experienced matching problems with the left PA, which possibly caused this stenosis. There were no donor or harvesting issues. The left lung had a longer ischemia time than the right, which was implanted first, but both within the normal time frame. Also, longer ischemia time is not known to increase the need for endobroncheal (EB) stents [1] as a surrogate marker for ischemia-induced anastomosis problems, and, in our patient, the left airway anastomosis looked prefect on bronchoscopy.

Vascular anastomosis complications after lung transplantation are rare, but cause significant morbidity [2,3]. The available treatment options are balloon angioplasty with or without vascular stent placement, reconstructive surgery, or a conservative approach.

Because the patients’ condition was stable, and interventions come with serious morbidity and mortality, we choose the latter. Left lung perfusion improved from 25% to 39% with conservative treatment in the 2 months following the first perfusion scan.

References