A patch plasty to inferior pulmonary vein: when more release is needed

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In a right upper sleeve resection, proximal anastomosis sometimes needs to be on the carinal level, and inferior pulmonary vein may require to be transposed due to tension and occlusion (Fig. 1(a) and (b)). An atrial patch plasty with pericardium could prevent this complication (Fig. 2(a) and (b)).

Fig. 1. (a and b) A 58-year-old male patient with a lung cancer located at the mainstem bronchi level without carinal invasion, with limited pulmonary functions had a right upper sleeve lobectomy and en bloc segmentectomy to lower lobe superior segment. After completion of the anastomosis, tension occurred and occluded the drainage in lower lobe pulmonary vein. Under this condition, either lower lobe vein should be transposed to superior location on left atrial wall or a pneumonectomy should be performed. We preferred to have an atrial patch plasty since it is technically easier and lesser part of the left atrium was clamped.

Fig. 2. (a and b) After intravenous administration of heparin 5000 iu, clamping the inferior pulmonary vein and left atrium together with venous Satinsky, an atrio-venous patch plasty was performed. The patient survives the forth year without recurrence and complication.