

Technical aspects of double reconstructions of pulmonary artery and bronchus for lung cancer

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[WCBIP] Tracheo-bronchoplasty

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Case Report: YES

Background : Double reconstructions of pulmonary artery and bronchus are sometimes necessary for complete resection and functional preservation in central lung cancer surgery. There are various types of reconstructions and which and how reconstruction should be performed first depends on a case.

We present two cases of double reconstruction of pulmonary artery and bronchus for central type lung cancer.

Case presentation: First case is a 77-year old man who had squamous cell carcinoma in left upper lobe. The stage was c-T2aN1M0 stage II A. The tumor obstructed left upper bronchus and invaded to pulmonary artery from A3 to A1+2. After clamping of pulmonary artery, left upper sleeve lobectomy was performed. Pulmonary artery was reconstructed with a parachute suture using pericardial patch. Bronchoplasty was done with interrupted suture with 4-0 PDS.

Second case was a 71-year old man who had squamous cell carcinoma in right upper lobe. The stage was c-T2aN1M0 stage II A. The operation was performed at the 4th anterior intercostal incision with video-assisted thoracic surgery. The tumor obstructed right upper bronchus and invaded to A2. After clamping of pulmonary artery, right upper lobectomy with wedge resection of bronchus was performed. Pulmonary arterial reconstruction was performed with direct suture and bronchoplasty was performed with continuous over-and-over suture on membranous portion and with interrupted suture on cartilaginous region. In cases of wedge bronchial resection, deep wedge trimming of bronchus was critical in order to obtain good anastomosis.

Conclusion: Double reconstruction of pulmonary artery and bronchus is feasible for functional preservation and good prognosis for central type lung cancer.