Concomitant Cardiac Surgery and Pulmonary Resection

Rokah, Merav[1]; Kogan, Alexander[2]; Simansky, David[3]; Ben Nun, Alon[3]; Raanani, Ehud[2]
[1]Sheba Medical Center, Department of Thoracic Surgery, Sackler School of Medicine, Tel Aviv University, Ramat Gan, Israel; [2]Sheba Medical Center, Department of Cardiac Surgery, Ramat Gan, Israel; [3]Sheba Medical Center, Department of Thoracic Surgery, Ramat Gan, Israel

Background: Concomitant lesions of the heart and lung are uncommon, but when present they pose a challenge for cardiac and thoracic surgeons. Patients with lung cancer and heart disease are at high risk of postoperative death or severe cardiovascular complications. The aim of this study was to review the early results of concomitant radical lung resection for cancer with simultaneous cardiac surgery.
Methods: From 1994 to 2011, seventeen patients (13 men and 4 women, aged 49 to 85 years, mean age 69.6 yrs) with lung cancer or another lung disease and coronary disease and/or valve disorders, were operated. 11 patients underwent coronary artery bypass grafting, 3 patients underwent aortic valve replacement and 3 patients underwent other cardiac surgery procedure. The pulmonary resections consisted of pneumonectomy in 1 patient, lobectomy in 6 patients and wedge excision in 10 patients. The approach to the heart and lung were through median sternotomy. All cardiac procedure procedures were undergone on cardiopulmonary bypass. Lung resection was performed immediately after completion of cardiac procedure and after reversal of heparin. Follow-up was obtained on all 17 patients (mean follow-up 24 months; range 121 to 1 months).
Results: There were no postoperative deaths in this group of patients. In 15 patients pathologic examination confirmed lung malignancy. 2 patients were operated due to non-oncological pathology. Overall late survival was 88% and 67% at 1 and 5 years, respectively.
Conclusions: Lung resection carried out concomitant with cardiac surgery is a safe and effective. A combined procedure avoids the need for a second major thoracic procedure and may improve early clinical outcomes.