Therapeutic bronchoscopy interventions before surgical resection of lung cancer

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BACKGROUND: Therapeutic bronchoscopy is used for endobronchial staging of lung cancer and symptomatic relief of central airway obstruction or postobstructive pneumonia. The aim of this study was to assess the utility of therapeutic bronchoscopy as a complementary tool in the combined bronchoscopic and surgical management of malignant airway lesions before curative lung surgery. METHODS: Seventy-four consecutive patients with nonsmall cell lung carcinoma undergoing a therapeutic bronchoscopy procedure followed by surgery with a curative intent were included. RESULTS: A single interventional bronchoscopic method was used in 27 patients (36%) and a combination of methods in 47 patients (64%). Median forced expiratory volume in 1 second (FEV1) before and after bronchoscopy were 1.7 L and 2.2 L, respectively, and forced vital capacity (FVC) was 2.5 L and 3.3 L, respectively. Sleeve upper lobectomy was performed in 22 patients (30%), sleeve upper bilobectomy in 16 patients (22%), lower bilobectomy in 2 patients (3%), pneumonectomy with sleeve resection in 2 patients (3%), and pneumonectomy in 28 patients (38%). The following surgeries were performed in 1 patient each: sleeve middle lobectomy, sleeve lower lobectomy, carina resection and complex reconstruction, and exploratory thoracotomy. Overall, parenchyma-sparing surgery (lobectomy or bilobectomy) could be performed in 57% patients after therapeutic bronchoscopy. There were no in-hospital deaths or deaths in the first 30 days after surgery. CONCLUSIONS: Therapeutic bronchoscopy can be used as a complementary tool in the combined bronchoscopic and surgical management of malignant airway obstruction before curative lung surgery. Therapeutic bronchoscopy might permit parenchyma-sparing surgery in patients with lung cancer.