

Aggressive Surgical Intervention for a Patient with Unresectable Lung Cancer Complicated by Pyothorax with Fistula

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A 61-year-old man presented with right lung adenocarcinoma with massive malignant pleural effusion complicated by pyothorax with major air leakage that contaminated the entire thoracic cavity during chemotherapy.

To enable resumption of anticancer therapy, we first performed open-window thoracostomy (see video 1, Supplemental Digital Content 1, <http://links.lww.com/JTO/A332>). This revealed that the air leakage was attributable to necrotic changes in the lung parenchyma at the periphery of the tumor. Air leakage ceased on postoperative day 1, and the dry gauze dressing filling the thoracic cavity was irrigated and changed daily. After the thoracic cavity was cleared, we performed thoracoplasty with interposition of pedicled latissimus dorsi muscle flap and pedicled omental flap on day 70 after thoracostomy (see video 2, Supplemental Digital Content 2, <http://links.lww.com/JTO/A333>). To minimize dislocation of the right shoulder and motor disability of the right arm, ribs I to III were spared. The space formed by the spared ribs was filled with pedicled muscle flap, and ribs IV to IX were

resected to obliterate the empyematous cavity. For 22 months after thoracoplasty, the patient visited the hospital once a month with administration of epidermal growth factor receptor tyrosine kinase inhibitor (gefitinib) because an analysis of the pleural effusion showed a sensitive epidermal growth factor receptor mutation (exon 19 deletion).

Pyothorax is a rare complication of lung cancer and interferes with anticancer therapy. Open-window thoracostomy followed by thoracoplasty is one of the therapeutic options in patients with unresectable lung cancer complicated by pyothorax.^{1,2}

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