

# Publication

Accelerated treatment of postpneumonectomy empyema : a binational long-term study

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OBJECTIVE: Postpneumonectomy empyema remains a clinical challenge. We proposed an accelerated therapy without an open chest window 5 years ago. This concept was evaluated on a larger scale in 2 centers in 2 different countries. METHODS: Between July 1995 and October 2005, 75 consecutive patients with postpneumonectomy empyema were treated in Szczecin, Poland (n = 35), and Zurich, Switzerland (n = 40). The therapy consisted of repeated open surgical debridement of the pleural cavity after achievement of general anesthesia, a negative pressure wound therapy of the temporarily closed chest cavity filled with povidone-iodine-soaked towels, and continuous suction and systemic antimicrobial therapy. If present, bronchopleural fistulae were closed and reinforced either with a muscle flap or the omentum. Finally, the pleural space was filled with an antibiotic solution and definitively closed. RE-SULTS: Of 75 patients (63 men; median age, 59 years; age range, 19-82 years), postpneumonectomy empyema was present on the right in 46 patients (32 with bronchopleural fistula) and in 29 patients (12 with bronchopleural fistula) on the left. Median time between pneumonectomy and postpneumonectomy empyema was 131 days (range, 7-7200 days). Bronchopleural fistulae have been closed and additionally reinforced by means of different methods (omentum, 18; muscle, 11; pericardial fat, 5; azygos vein, 1). The chest was definitively closed within 8 days in 94.6% of patients. The median hospitalization time was 18 days (range, 9-134 days). Postpneumonectomy empyema was successfully treated in 97.3% of patients, including 10 (13%) patients who needed a second treatment cycle. Three (4%) patients died within 90 days. The median follow-up time was 29.5 moths (range, 3-107 months). CONCLUSIONS: Treatment of postpneumonectomy empyema with the accelerated treatment is effective and safe. Our results are superior compared with those in reported series using a (temporary) chest fenestration. Patients appreciate the physical integrity of the chest.

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