

The effect of fibrin glueing to seal bronchial and alveolar leakages after pulmonary resections and decortifications.

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Abstract:

In order to investigate the effect of fibrin glueing on the treatment or prevention of air leakages, 114 patients undergoing pulmonary resections and pneumonectomies were studied in two treatment groups: surgery alone (59 patients) or analogous surgical treatment followed by the application of fibrin glue (55 patients). The patients were randomly assigned to treatment groups within two strata: pulmonary resections (63 patients) and pneumonectomies (51 patients). Intraoperatively, 81% of the patients undergoing pulmonary resection who suffered from air leakages after conventional suturing showed improved results of the airway-tolerance-pressure test after the application of fibrin glue (one-sided P value < 0.01; 95% confidence interval: 58-95%). Treatment with fibrin glue reduced the incidence of postoperative leakages significantly from 66% in the control group to 39% in the treatment group (one-sided P-value < 0.02; estimated risk reduction 41%; 95% confidence interval 2-65%). An additional reduction of the duration of post-operative air leakages by the treatment with fibrin glue could not be shown. In terms of minor response criteria, slight trends for an advantage of treatment with fibrin glue could be observed for the duration of stay in hospital and the number of patients with complications. There were no obvious trends concerning fever, intraoperative and postoperative intubation times, the amount of secretion from thoracic tubes and the general condition of the patients. No adverse drug event related to fibrin glueing was observed.