Clinical experience of the combined use of polyglycolide non-woven felt with fibrin glue to prevent postoperative pulmonary fistula. [Japanese]

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Abstract:

Felt prepared from polyglycolide (PGA) polymer fibers was pasted with fibrin glue for prevention of postoperative pulmonary fistula, and its effects were evaluated. The subjects were 90 patients who underwent thoracotomy and were expected to develop air leakage between March 1990 and the end of 1993. The felt sheet was simply pasted in position in 67 patients, applied and fixed by suturing in 7, and sutured and pasted in 16. The duration of air leakage in the three groups were 4.6 +/- 4.1, 3.9 +/- 4.9, and 3.2 +/- 3.8 days, respectively. According to the surgical procedure employed, the duration of air leakage was 5.0 +/- 4.0 days in 41 patients who underwent pulmonary lobectomy, 5.0 +/- 4.3 days in 5 patients who underwent segmentectomym, 2.6 +/- 3.1 days in 26 cases who underwent partial pneumonectomy, and 4.9 +/- 4.0 days in the 14 cases who underwent bulla resection. In terms of disease, the leakage time was 4.6 +/- 4.2 days in patients with emphysema, 0.6 +/- 1.2 days in those with diffuse pulmonary fibrosis, 0.7 +/- 0.9 days in those with Infectious disease, 4.8 +/- 4.2 in those with lung cancer, 1.5 +/- 1.5 days in those with benign lung tumor, and 3.8 +/- 2.7 days in those with metastatic lung tumors. The procedure had no side-effect on liver or kidney function. No infection was observed even after decortication for empyema. The use of felt prevented excessive shrinking of the lung due to over-suturing. Therefore, intraoperative application of a PGA felt sheet was considered to be an effective method for prevention of pulmonary fistula.