

Additional aerostasis with a 100% autologous fibrin glue in lung surgery--a prospective randomised trial. [Bulgarian]

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Abstract:

OBJECTIVES: To evaluate the efficacy of the additional aerostasis with 100% autologous fibrine glue (AFG) in a prospective randomized trial. **MATERIAL AND METHODS:** A total of 100 patients, operated on for bullous emphysema and spontaneous pneumothorax, were randomized into two homogenous groups: Group A (with additional intraoperative aerostasis with AFG) and Group B (control group). The patients in these groups were also stratified into two groups each: Subgroup A1 and Subgroup B1 (with slight intraoperative leakage - $< 20\%$) and Subgroup A2 and Subgroup B2 (with moderate and severe intraoperative leakage - $> 20\%$). The intraoperative monitoring of the aerostasis was achieved by pressure/volume (P/V) curves constructed by an AS/3 Datex monitor. The duration of air leakage, intrapleural drainage and postoperative hospital stay were monitored postoperatively. The postoperative complications and the hospital stay cost for the patient in both groups were compared as well. **RESULTS:** A significant reduction ($p < 0.001$) occurred in Group A and Subgroup A2 compared with Group B and Subgroup B2 for the mean duration of air leak (3.4 ± 1.6 vs 6.8 ± 1.9 , resp. 2.2 ± 0.98 vs 5.4 ± 1.2), the duration of chest drainage (4.2 ± 1.5 vs 9.6 ± 2.8 , resp. 6.1 ± 2.4 vs 10.8 ± 3.6 and the postoperative stay (6.7 ± 2.1 vs 10.08 ± 3.9 , resp. 7.9 ± 2.7 vs 11.82 ± 4.2). In the Subgroups A1 and B1 there were no statistically significant differences of the observed postoperative variables. The incidence rate of postoperative complications is significantly higher in Group B (16% vs 42%). There was a significant reduction of hospital stay cost in leva for one patients in Group A compared with Group B (2940 ± 246 vs 4466 ± 321). **CONCLUSIONS:** Intraoperative additional aerostasis with 100%AFG is a highly effective

(especially in cases with moderate and severe leakage), safe, simple and economical procedure.