

# **Sutureless Pneumostasis Using Polyglycolic Acid Mesh as Artificial Pleura During Video-Assisted Major Pulmonary Resection.**

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## **Abstract:**

Background: Postoperative air leaks impede rehabilitation and prolong hospitalization after pulmonary resection. To promote rehabilitation after video-assisted major pulmonary resection, we attempted to control alveolar air leaks without suturing, using polyglycolic acid mesh as artificial pleura. Methods: Forty-five patients undergoing video-assisted major pulmonary resection in our institute were enrolled in this study. Pneumostasis was done for intraoperative air leaks, by combining polyglycolic acid mesh with fibrin glue. We removed the chest tube the day after the air leaks stopped. Results: Pneumostasis was done for intraoperative air leaks in 28 patients. The air leaks stopped immediately, allowing chest tube removal on postoperative day 1 in all but one patient whose air leak took 1 day longer to disappear. The time of chest tube drainage and the postoperative stay were similar in the patients with and those without intraoperative air leaks (mean 1.0 days vs 1.2 days and 6.8 days vs 7.1 days, respectively). The percentage of predicted forced expiratory volume in one second was significantly lower in patients with, than in those without, intraoperative air leaks ( $p < 0.05$ ). Conclusions: We achieved sutureless pneumostasis using bioabsorbable artificial pleura during video-assisted major pulmonary resection. This method may contribute to reducing hospitalization, especially in patients with poor pulmonary function. © 2007 The Society of Thoracic Surgeons.