Fibrin-glue-coated collagen fleece in lung surgery - Experimental comparison with infrared coagulation and clinical experience.

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Abstract:

Diffuse parenchymal bleeding and major air leaks still present a challenge to the thoracic surgeon. This study was therefore designed to evaluate efficacy and handling of fibrin-glue-coated collagen fleece, to address these problems. In an experimental part defects were produced in lungs of troll pigs to compare the use of the fleece with infrared coagulation. Immediate airtightness and postoperative adhesions were evaluated. Scores were designed to evaluate quality and extension of the adhesions. In a clinical study parenchymal resection sites were sealed with fibrin-glue-coated collagen fleece in 52 patients No patient suffered from postoperative bleeding. In three cases air leaks were still present on the third postoperative day, representing a 5.8% failure rate. 92.3% of the patients showed neither postoperative hemorrhage nor prolonged air leaks. A fixed combination of collagen fleece and fibrin glue consequently can be considered as a valuable tool in thoracic surgery.