Fibrin sealant for prevention of resection surface-related complications after liver resection.

Authors: De Boer M.T., Klaase J.M., Verhoef C., Van Dam R.M., Van Gulik T.M., Molenaar I.Q., Bosscha K., Porte R.J.

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Abstract:

Introduction: Bile leakage, bleeding and abscess formation are major resection surface-related complications after liver resection. It is unclear whether application of fibrin sealant to the resection surface is effective in reducing these complications. Objective of this study is to evaluate efficacy of fibrin sealant in reducing resection surface-related complications in liver surgery. Methods: In a multicenter, randomized trial in 310 noncirrhotic patients undergoing liver resection, we compared prophylactic application of fibrin sealant to the resection surface (156 patients) with no application of fibrin sealant (154 patients). In addition to clinical assessments, patients underwent protocolized CT-scan one week postoperatively. Primary endpoint was a composite of postoperative resection surface-related complications (bile leakage, bleeding or abscess), as adjudicated by a clinical-events committee that was unaware of the study-groups assignments. Results: Overall rate of resection surface-related complications was not different between the two groups: 24% (38/156 patients) in the fibrin sealant group and 24% (37/154 patients) in the control group. Bile leakage was detected in 14% of patients in the fibrin sealant group and in 14% of controls. CT-scans showed a fluid collection at the resection surface larger than 100 L in 28% of patients in the fibrin sealant group and in 26% of controls (P = 0.800). The rate of reinterventions for resection surface-related complications (12% vs. 10%; P = 0.492) and severity of complications did also not differ between the two groups. Conclusion: This randomized multicenter trial shows that prophylactic application of fibrin sealant at the resection surface after liver resections does not lead to a reduction in the

incidence or severity of postoperative bile leakage or other resection surface-related complications.