# Effects of primary suture and fibrin sealant on hemostasis and liver regeneration in an experimental liver injury.

Authors: Demirel A.H., Basar O.T., Ongoren A.U., Bayram E., Kisakurek M.

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## Abstract:

Aim: To investigate the effects of fibrin sealant on hemostasis and liver regeneration and intra-abdominal adhesions in an experimental liver injury. Methods: Thirty-six Wistar rats were randomly divided into primary suture group (n = 15), fibrin sealant group (n = 15) and control group (n = 6). A wedge resection was performed on the left lobe of the liver. In primary suture group, liver was sutured using polypropylene material, while fibrin glue was administrated on the liver surface in fibrin sealant group. Results: More intra-abdominal adhesions were observed in the primary suture group compared to the fibrin sealant group on 3rd (2.50 +/- 0.5 vs 0.25 +/- 0.5, P = 0.015), 10th (2.75 +/- 0.5 vs 0.50 +/- 0.6, P = 0.06) and 20th (1.75 +/- 0.5 vs 0.70 +/- 0.5, P = 0.015) postoperative days. Histopathological scores were better in the fibrin sealant group in comparison with the primary suture group on 3rd (8.75 +/- 0.5 vs 6.75 +/- 0.5, P = 0.006), 10th (7.50 +/- 1.0 vs 5.5 +/- 0.6, P = 0.021) and 20th (6.40 +/- 1.7 vs 3.20 +/- 1.6, P = 0.025) postoperative days. Conclusion: Out data suggest that fibrin sealant is preferred over primary suture in appropriate cases including liver trauma since it causes less intra-abdominal adhesions while allowing shorter hemostasis time as assessed in experimental liver trauma. 