

Systematic review and meta-analysis of application of fibrin sealant after liver resection.

Authors: Ding H., Yuan J.-Q., Zhou J.-H., Zheng X.-Y., Ye P., Mao C., Chen Q.

Publication Date: 2013

Abstract:

Background: Fibrin sealant (FS) has been increasingly used on the raw surface after liver resection but its clinical value has not been established to date. The aim of this study was to evaluate the efficacy and safety of the employment of FS after liver resection. Methods: PubMed, Cochrane Library, Embase, CNKI, CBM and VIP were searched for randomized trials comparing the effect of FS with no FS or any other intervention for patients undergoing liver resection. Primary outcomes included time to hemostasis, hemostatic success, amount of drainage and drainage duration. Results: Eleven randomized controlled trials were included. Meta-analysis suggested that the amount of drainage (standard mean difference -0.30; 95% confidence interval [CI] -0.82 to 0.23) and drainage duration (mean difference [MD] -0.46, 95% CI -0.61 to -1.53) were similar between FS group and no FS group. Compared with topical hemostatic agents, FS could significantly reduce time to hemostasis (MD -208.46, 95% CI -228.22 to -188.70) and increase hemostasis success rate (relative risk 1.35, 95% CI 1.17 to 1.57). Two trials compared FS with argon beam coagulation (ABC), which both suggested that FS could significantly decrease the time to hemostasis. Conclusions: This study demonstrated a modest benefit of FS over no FS, topical hemostatic agents and ABC in controlling intraoperative bleeding from the raw liver surface after liver resection. But there is no evidence that FS is beneficial to patients in reducing amount of drainage and drainage duration. © 2013 Informa UK Ltd All rights reserved.