

Topical gentamicin does not provide any additional anastomotic strength when combined with fibrin glue.

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Abstract:

Background: We evaluated the effect of a combination of fibrin sealant and topical gentamicin on a colonic anastomosis in a rat model. **Methods:** Partial anastomosis in the transverse colon was performed in 70 male SpragueDawley rats aged 6 to 10 weeks using 5 interrupted sutures. The rats were divided into 4 groups (control, gentamicin, fibrin glue, and combination). On postoperative days 3 and 5, the rats in each group were killed, anastomotic bursting pressures scores and bowel loop adhesions were determined, and histologic examination was performed. **Results:** No significant difference was noted in the bursting pressures, adhesions, inflammatory infiltrates, fibroblasts, or neoangiogenesis between the fibrin-glue only and the combination groups for both the day 3 and day 5 subgroups. **Conclusions:** The combination of topical gentamicin and fibrin glue had little effect because the combination did not provide additional anastomotic strength or decrease the number of adhesions when compared with fibrin glue alone. © 2011 Elsevier Inc.