Fibrin sealant in laparoscopic adhesion prevention in the rabbit uterine horn model.

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Abstract:

OBJECTIVE: To assess the effects of fibrin sealant on adhesions after laparoscopic surgery.

DESIGN: Standardized surgical trauma was induced in 60 female rabbits. The animals were randomized in three groups for different adhesion prevention treatment.

SETTING: University research laboratory.

INTERVENTIONS: After standardized trauma was induced, group 1 (n = 20) received no treatment, group 2 animals (n = 20) were injected in the abdominal cavity with 60 mL of Ringer's lactate, and human fibrin sealant was applied on the surgical lesions under laparoscopic vision in group 3 (n = 20).

MAIN OUTCOME MEASURES: Five weeks after laparoscopy, a laparotomy was performed, and the adhesions were scored.

RESULTS: Fourteen of 20 rabbits in the control group (70%) presented postoperative adhesions, 11 of 20 (55%) in the Ringer's group, and 5 of 20 (25%) in the fibrin sealant group. High-score adhesions were seen in 15% of cases in control and Ringer's group and in 5% of cases in the fibrin sealant group.

CONCLUSIONS: When used during laparoscopic surgery, fibrin sealant has a preventive effect on de novo postsurgical adhesions. To assess the efficacy in reproductive surgery, a trial on recurrent postsurgical adhesions is required.