The wound-healing effect of fibrin glue for tracheal anastomosis in experimental pulmonary surgery.

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Publication Date: 2001

Abstract:

The leakage of tracheal anastomoses is one of the major complications that occurs after tracheal reconstruction. Improved reinforcing methods for anastomoses would thus be clinically useful. To find a better technique, we examined the postoperative would-healing effect of fibrin glue on tracheal anastomosis in the rat. Experimental rats were divided into two groups. In the control group (n=21), the trachea was anastomosed by interrupted absorbable sutures. In the fibrin glue group (n=21), the trachea was anastomosed in the same manner as the control group, with the addition of fibrin glue around the area of anastomosis. In the two groups, we studied the amount of hydroxyproline and histological findings on the seventh, 14th, and 21st postoperative day. The amount of hydroxyproline and collagen fibers in the fibrin glue group was more than in the control group on the seventh postoperative day. These results suggest that fibrin glue has a promotive effect in the healing of tracheal anastomosis.