

Comparison of topical fibrin glue, fibrinogen, and thrombin in preventing seroma formation in a rat model.

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Abstract:

Fibrin glue has been shown to decrease seroma formation in animal models. To further delineate this mechanism, the efficacy of fibrin glue was compared to topical fibrinogen and thrombin in preventing postoperative seromas. A model consistently producing seromas was developed by bilateral neck dissection, lymphadenectomy, and submandibular sialoadenectomy in the Sprague-Dawley rat. Groups of 20 rats underwent this procedure and were blindly treated with either fibrin glue, fibrinogen, thrombin, or saline control. Necropsy on postoperative day 5 revealed a statistically significant (chi-squared) decrease in seroma incidence using fibrin glue (0%) and fibrinogen (15%), while thrombin (95%) and saline (100%) were ineffective in preventing seromas. The use of fibrin glue and fibrinogen in this role merits further investigation.