Platelet gel sealant use in rhytidectomy.

Authors: Brown SA, Appelt EA, Lipschitz A, Sorokin ES, Rohrich RJ

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Abstract:

BACKGROUND: A prospective study was used to evaluate the efficacy of a commercially available platelet gel product as a sealant to decrease postsurgical drain fluid rates and volumes in patients who have undergone rhytidectomy procedures. Quantitative assessments of postoperative drain fluid outputs were compared in subjects who did and did not receive platelet gel treatment.

METHODS: Autologous platelet concentrate was prepared from each subject (n = 19), combined with bovine thrombin to form a platelet gel, and applied during the rhytidectomy procedure. Surgical drains were placed and effluent was collected postoperatively at 8-hour intervals for 24 hours and the volumes were recorded. A retrospective examination of surgical drain output over time in subjects (n = 14) who did not receive platelet gel treatment was performed; this group served as the control group.

RESULTS: Subjects who received the platelet gel sealant treatment had significantly decreased surgical drain fluid levels over 24 hours [109 +/- 8.5 ml (mean +/- SEM)] compared with subjects who did not receive the platelet gel sealant (78 +/- 7.5 ml) ($p < 0.02$). From 0 to 8 hours postoperatively, platelet gel-treated subjects had a mean 35 percent decrease in fluid levels compared with the controls ($p < 0.03$). No difference in surgical drain outputs was observed from 8 to 16 hours between the two experimental groups. From 16 to 24 hours, the control group had increased mean fluid levels (20 percent) and the platelet gel sealant group output levels decreased (50 percent).

CONCLUSIONS: Platelet gel sealant treatment was associated with decreased surgical fluid drain output in the first 24 hours postoperatively.