The use of fibrin glue in the healing of skin flaps.

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Abstract:

Purpose: To determine whether the use of fibrin glue has an impact on wound drainage created in an animal model. Materials and Methods: Fibrin glue was prepared from single-donation autologous phlebotomy before surgery. Bilateral skin flaps were raised over the parotid gland in 10 rabbits. After exposure of the parotid, fibrin glue was applied on one side using an atomizer. The opposite side was treated with normal saline. Self-suction drains were placed under each flap and the wounds closed. Drainage was recorded daily for 7 days. Results: Drainage differed significantly (P = .001) between the two sides on the first postoperative day and subsequent days. The average drainage on the fibrin-glue-treated side was 2.1 mL on the first day and 0.5 mL on subsequent days. On the nontreated side, the average output was 13.4 mL on the first day and 4.6 mL on subsequent days. Conclusions: This preliminary animal investigation showed that fibrin glue treatment decreased wound drainage. It is hoped that this concept may be applied to commonly performed head and neck procedures in which large flaps are elevated and large potential spaces are created. By decreasing the amount of drainage, fibrin glue has the potential to improve coaptation of flaps and minimize potential for seroma and hematoma formation. In some cases, the use of closed suction drains may be shortened and possibly eliminated, with shorter length of hospitalization.