

The hemostatic effect of fibrin glue on graft donor sites.

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Abstract:

One of the main uses of topical fibrin glue is hemostasis. Fibrin glue from pooled human plasma has been used in Europe for many years. It was used for fixation of skin grafts as early as 1944. Because of the risk of hepatitis and now of acquired immunodeficiency syndrome, this compound has not been approved by the U.S. Food and Drug Administration for use in the United States. It is now possible to make fibrin glue from a single unit of blood. Many blood banks have this capability, and burn centers in the United States are beginning to report its use in skin grafting procedures performed on patients with burns. In an effort to document a hemostatic effect, a prospective double-blind study was designed. Donor sites of patients with burns undergoing skin grafting were studied to provide a uniform wound; anatomic location varied, particularly with respect to gravity. Half of each donor site was sprayed with thrombin and fibrin glue, and the other half was sprayed with thrombin and placebo. A large absorbent pad was placed over the gauze dressing, and all dressings were collected and weighed by the investigators at 6 and 18 hours after the operation. Ten patients have been studied to date. In five patients slightly more bleeding occurred in the site treated with fibrin. One patient had no difference, and four had slightly less bleeding on the donor site treated with fibrin. No significant difference could be found in this initial study group. In this prospective double-blind study of skin graft donor sites, no significant difference in blood loss between areas treated with thrombin and fibrin glue and areas treated with thrombin and placebo could be found. It is recommended that additional work be done to determine the role of topical fibrin in burn care.