The use of autologous fibrin adhesive in skin transplantation.

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Abstract:

A method for preparing concentrated fibrinogen for use in autologous fibrin adhesive is described. The adhesive was used in seven patients with eight chronic leg ulcers. The ulcers were divided into two equal sections, and the adhesive was used to seal split-thickness skin grafts in one section, while no adhesive was used to seal the grafts in the other section of the ulcer. The strength of adhesion was measured 3 1/2 minutes after transplantation of a 1-cm² test split-thickness skin graft. In the sealed grafts, the breaking strength varied from 12 to 26 gm. In the unsealed transplants, the strength was less than 5 gm. The take of the meshed split- thickness skin grafts was equal in the sealed and the unsealed areas, varying from 90 to 100 percent. Biopsies taken on day 7 showed a splitting between graft and recipient bed in half the unsealed grafts; none of the sealed grafts showed splitting, indicating a more stable graft in the sealed areas. Biopsies taken on day 21 showed no difference between sealed and unsealed grafts.