Smoking and diabetes mellitus type 2 reduce skin graft take; the use of fibrin glue might restore graft take to optimal levels.

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Abstract:

Efficacy has been demonstrated in some uses of fibrin glue associated with graft loss. Smoking and hyperglycemia significantly decrease the success of skin graft survival in specific injuries. This retrospective study aimed to verify the association with decreased skin graft survival and whether fibrin glue is useful in reversing the influence of these factors. This bicentric, retrospective, cross sectional case control study was carried out on 1881 medical patients. Patients who met inclusion criteria were admitted to the Plastic Surgery Service of Reina Sofia University Hospital (Spain) and the Trauma/Burn intensive Care Unit of UAB Hospital at Birmingham (USA) between January 2000 and December 2009. The successful graft take for each group and its control were analyzed by a Chi-square test; the confidence interval was 95%. Smoking and DM type 2 decrease skin graft survival when compared with their control groups. There was a statistically significant improvement in skin graft take when fibrin glue was used. The percentage improvement in the control groups was approximately 10%, whereas in the study groups it was 2-3 times higher.We conclude that graft loss is associated with smoking and DM type 2, but fibrin glue might restore graft adherence to almost normal levels.