The use of fibrin glue in skin grafts and tissue-engineered skin replacements: a review. [Review] [116 refs]

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Abstract:

Fibrin glue has been widely used as an adhesive in plastic and reconstructive surgery. This article reviews the advantages and disadvantages of its use with skin grafts and tissue-engineered skin substitutes. Fibrin glue has been shown to improve the percentage of skin graft take, especially when associated with difficult grafting sites or sites associated with unavoidable movement. Evidence also suggests improved hemostasis and a protective effect resulting in reduced bacterial infection. Fibrin, associated with fibronectin, has been shown to support keratinocyte and fibroblast growth both in vitro and in vivo, and may enhance cellular motility in the wound. When used as a delivery system for cultured keratinocytes and fibroblasts, fibrin glue may provide similar advantages to those proven with conventional skin grafts. Fibrin glue has also been shown to be a suitable delivery vehicle for exogenous growth factors that may in the future be used to accelerate wound healing. [References: 116]