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The effect of negative pressure wound therapy integration into skin grafts

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Purpose:

Negative pressure wound therapy (NPWT) has been used for treating acute and chronic wounds worldwide for almost 20 years. NPWT can improve regional blood flow, reduce bacterial proliferation and promote granulation tissue growth. However, there are seldom researches discussing NPWT as a bolster dressing for skin grafts.

Materials and Methods:

During July 2016 to July 2017, there were 26 patients (17 males and 9 females) who received NPWT as a bolster dressing after skin graft surgery. 24 patients underwent Split thickness skin graft (STSG) surgery and 2 patients received Full thickness skin graft (FTSG) surgery. The etiology of skin defect includes diabetic foot, trauma, necrotizing fasciitis, and burn scar contracture. All patients using this method do not need postoperative splint fixation.

Results:

The average NPWT using time after skin graft surgery is 4 days. The average skin graft area is 211.2 cm2. The mean graft take percentage is 95.3%. The wound healing time is from 7 days to 20 days postoperatively. No hematoma, recipient site infection, or other complications were noted.

Conclusion:

In spite of various etiology of skin defect and patients' underlying disease, use NPWT integration into skin grafts shows good result. The deficiency of this method is relative higher financial cost compare to the conventional compression dressing.