Clinical outcomes of full thickness skin graft combined with negative pressure wound therapy in diabetes mellitus foot amputee after infection.
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Category: Diabetes

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Introduction/Purpose: Infected diabetes mellitus (DM) foot has been controlled with amputation. After performing the amputation with preserving enough length of the foot due to functional and cosmetic advantages, remaining wounds have been covered with split thickness skin graft (STSG) despite of sacrifice of donor site with pain and scar. We hypothesized outcomes of full thickness skin graft (FTSG) combined with negative pressure wound therapy (NPWT) can be an alternative STSG. The aim of this study was to investigate clinical outcomes of FTSG combined with negative pressure wound therapy in DM foot infection.

Methods: This study included 21 patients of infected DM foot (21 feet). There were 20 cases of midfoot and 1 case of hindfoot. We performed the amputation and combined NPWT at a mean age of 51.7 years (37 to 81) with the mean 12 months follow-up between June, 2014, and January, 2016. FTSG was performed after sufficient granulation healing of DM foot amputee. We measured multiple risk factors preoperatively and postoperatively. The wound healing after FTSG was evaluated during the followup. The relationship between outcomes of FTSG and multiple risk factors were evaluated.

Results: 20 feet showed complete healing of wound. One foot showed failed wound healing. Mean NPWT number of times before the FTSG were 11. Mean C-reactive protein (CRP) values and Hemoglobin A1C (HbA1C) were 1.24 and 9.21 just before FTSG, respectively. There were no significant correlations between wound healing and risk factors (CRP, HbA1C) (p=0.223, p=0.175).

Conclusion: Full thickness skin graft combined with negative pressure wound therapy (NPWT) can be the treatment of choice for the diabetes mellitus foot amputee as an alternative STSG.

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