

Limb Salvage of Large Pretibial Wound with Exposed Bone Using TheraGenesis

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Background

Distal extremity wounds are a challenge for successful coverage secondary to:

- Limited tissue coverage
- Poor vascularity
- Risk of exposed bone

Comorbidities like peripheral arterial disease and diabetes complicate outcomes

Treatment includes:

- Local wound care
- Negative pressure wound therapy (NPWT)
- Flap reconstruction
- Split-thickness skin grafting (STSG)
- Dermal regeneration templates

Goal for adequate healing is to convert non-graftable wounds to graftable sites

Objective

Report a successful case of limb salvage using TheraGenesis in a complex lower extremity wound with exposed tibia.

Case Presentation

Patient: 73-year-old female with history of diabetes, peripheral arterial disease, hypertension, and hyperlipidemia. Presented with a large full-thickness pretibial wound measuring 24 x 12 cm with exposed bone following debridement.

Treatment Course



A – Pre-operative photo, B – S/p debridement, C – 1st post operative visit following 1st TheraGenesis application, D – 2nd post operative visit following 1st TheraGenesis application, E – 1st post-operative visit following 2nd TheraGenesis application, F – 2nd post-operative visit following 2nd TheraGenesis application, G – 1 week following STSG, H – 2 weeks following STSG

Results

On day 43 following first debridement the wound bed was noted to have:

- Healthy granulation tissue
 - Complete coverage of exposed tibia
- STSG demonstrated excellent adherence with excellent adherence, full epithelization, and functional recovery

Discussion

Dermal regenerative templates, TheraGenesis in this case, enabled healthy granulation of a wound bed over exposed bone. A non-graftable wound bed was converted to a healthy base for STSG.

Advantages:

- Avoided need for flap reconstruction
- Effective despite complicating comorbidities
- Successful staged reconstruction of complex wound

Conclusion

TheraGenesis is a successful adjunct in limb salvage which can aid in converting complex wounds into a graftable base. Serves as a successful adjuvant in wound management in patients with significant medical comorbidities/vascular disease.