

Sclerodermic foot ulcers: efficacy of a bioactive dressing and proposal a novel risk stratification model

Lavinia Cacciatore¹

¹Pododynamic, licata, Italy

Aim: This study pursues a dual objective: to evaluate the clinical effectiveness of a bioactive dressing containing Triticum vulgare (TVE) and polyhexanide in treating non-infected digital ulcers in a patient with systemic sclerosis (SSc), and to propose—for the first time—a dedicated risk stratification model for the sclerodermic foot, currently absent in the literature.

Method: A case report was conducted on a 61-year-old woman with SSc and non-infected, low-exudate digital ulcers. Treatment included cleansing every 48 hours with a TVE and polyhexanide-based spray, selective debridement, application of impregnated bioactive gauze, and weekly clinical monitoring (photographic documentation, wound area measurement, pain VAS scale).

In parallel, a new multidimensional tool—the ScleroFoot Risk Assessment Tool—was applied, integrating:

- Patient history and disease subtype
- Comorbidities and peripheral vasculopathy
- Foot examination (biomechanical and cutaneous changes)
- Diagnostic imaging (capillaroscopy, ABI, Doppler)
- Footwear and offloading assessment
- A weighted scoring system (low, moderate, high, critical)

Results / Discussion: The ulcer treated from July 12 to August 1 showed near-complete healing in 3 weeks (1.4 mm/week), with pain reduced from VAS 6 to 2 and no recurrence at 2-month follow-up. The ScleroFoot Tool categorized the patient as moderate risk, enabling a

personalized treatment and prevention strategy. A retrospective comparison with a prior ulcer (Feb 23–Apr 5), treated using standard dressing, showed slower healing (0.5 mm/week), further supporting the effectiveness of the bioactive protocol.

Conclusion: This case demonstrates the clinical value of a TVE and polyhexanide-based dressing and introduces the first structured risk stratification model for the sclerodermic foot. This tool may enhance targeted prevention, support multidisciplinary care, and help reduce complications such as amputation. Further validation is recommended.