

Periwound Pigmentation in Lower Extremity Scleroderma Ulcers

Across Skin Tones

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Background

- Systemic sclerosis (SSc) causes chronic lower-extremity ulcers
- Wound assessment relies on visual cues (erythema, tissue change)
- Erythema is less visible in darker skin tones
- Periwound pigmentation may reflect chronic inflammation
- Not previously characterized across skin tones

Methods

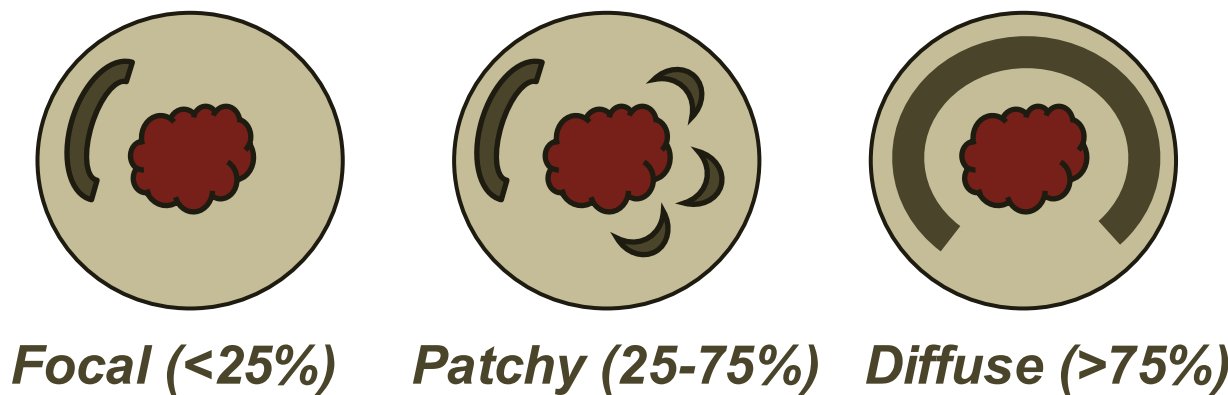
- Retrospective review of systemic sclerosis patients (2015–2024)
- Tertiary wound care center (University of Miami)
- 20 patients with 52 lower-extremity ulcers
- Skin tone classified using Monk Skin Tone (MST) scale
- Skin of color (SOC): MST 6–10
- Wound-level descriptive analysis

Methods

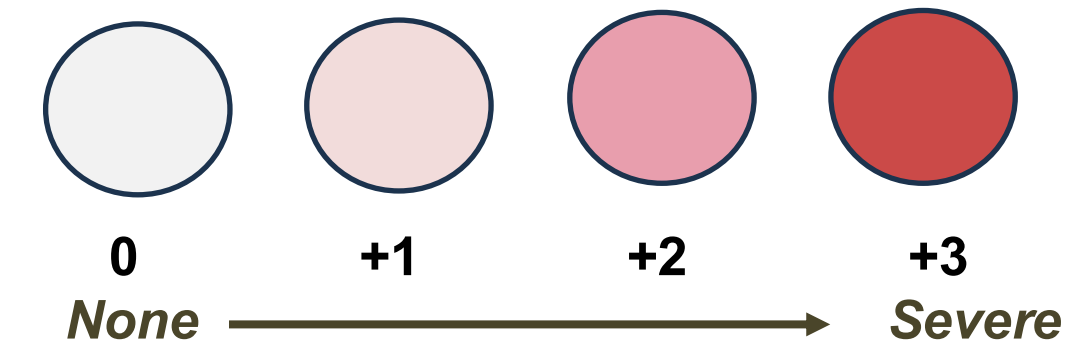
Pigmentation Scale (-3 to +3)



Distribution

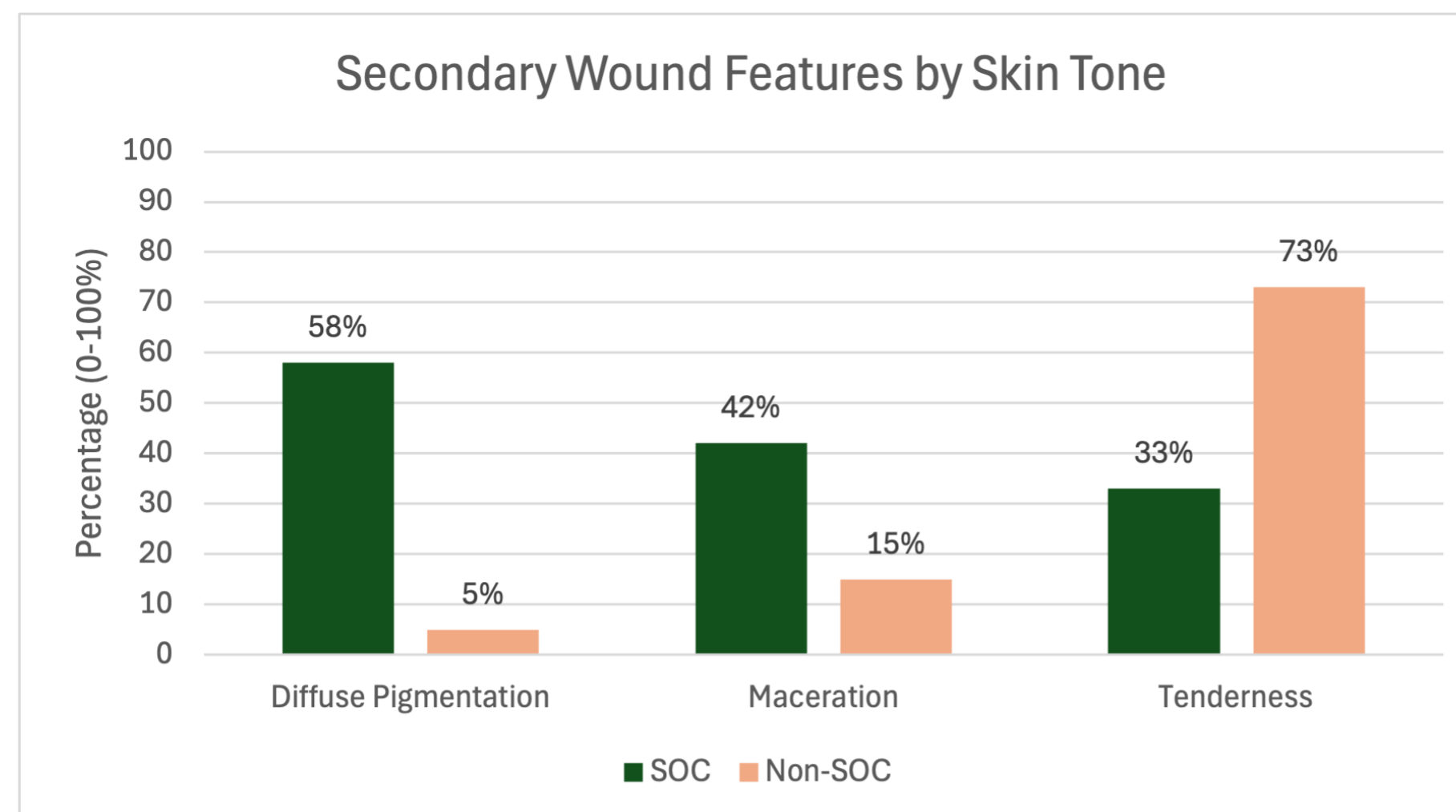


Erythema Scale (0 to +3)



Results

SOC ulcers demonstrated higher pigmentation (2.08 vs. -0.10) and lower erythema (0.67 vs. 1.55)



SOC: Diffuse hyperpigmentation with minimal erythema



Non-SOC: prominent erythema

Conclusion

- Periwound pigmentation is a distinct and clinically relevant feature of SSc ulcers
- SOC ulcers demonstrate greater pigmentation and reduced visible erythema
- Reliance on erythema alone may underestimate inflammation in SOC
- Pigment-aware assessment may improve wound evaluation and monitoring

Limitations:

- Small sample size with limited SOC representation
- Retrospective, single-center design
- Subjective scoring without validated pigmentation scale

References

1. Bohelay G et al. Acta Derm Venereol. 2018
2. Kirsner RS et al. Br J Dermatol. 2015
3. Garg SP et al. Wound Repair Regen. 2023