

Copper-Infused Dressings in the Care of Pyoderma Gangrenosum: Results From an Outpatient Case Series

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Introduction

Pyoderma gangrenosum (PG) is a rapidly progressive neutrophilic dermatosis characterized by severe inflammation, significant pain, and prolonged wound healing. While systemic therapies such as corticosteroids and biologics are essential, optimizing local wound care remains critical for achieving meaningful symptom control and preventing setbacks. Copper-infused dressings provide selective antimicrobial activity, localized inflammatory modulation, and improved patient comfort. This case series evaluates the use of copper dressings across the continuum of PG care within an outpatient wound-care clinic.

Methods

A retrospective case series of PG patients in a multidisciplinary outpatient wound clinic was conducted. All patients received copper-infused dressings from presentation through healing.

Data collected:

- Clinical outcomes and patient-reported pain score
- Serial wound photographs

Key factors assessed:

- Time to pain reduction
- Local inflammation and wound-bed stability
- Epithelialization progress
- Compatibility with systemic/biologic therapy
- Ease of dressing use for patients and caregivers

All systemic therapies were continued as clinically indicated.

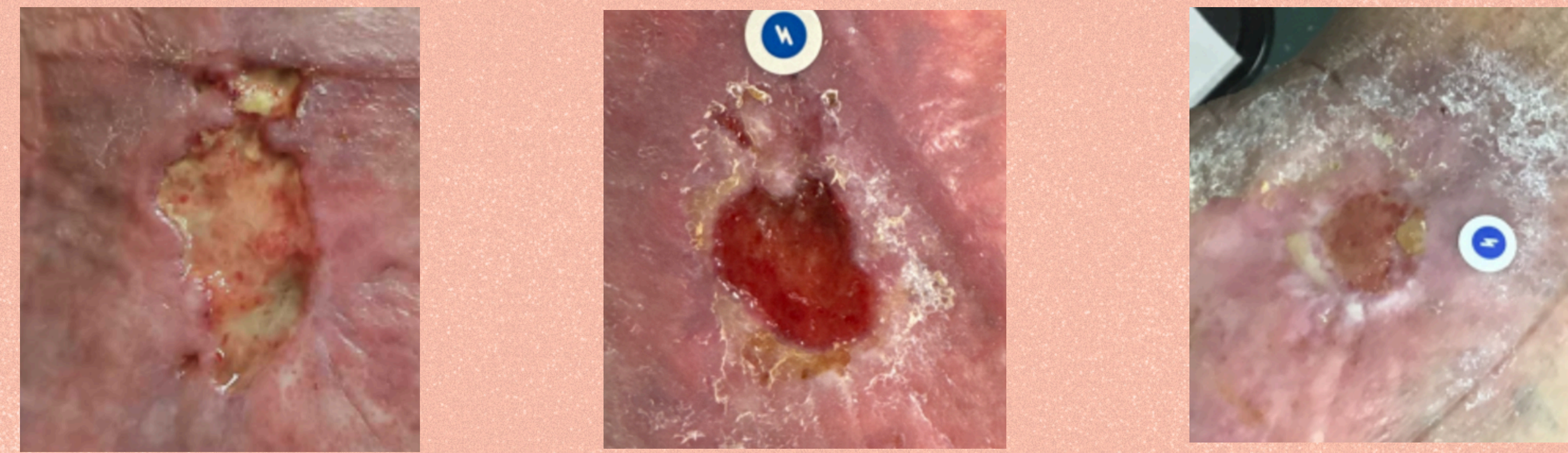


● Case 1 – 52 M, Pyoderma Gangrenosum (PG)
Chronic lateral lower leg ulcer (biopsy-confirmed PG)

Treatment: low-dose prednisone, copper dressings, amniotic grafts

Copper Role:

- Wound bed preparation through biofilm disruption, creating a clean base
- Reduced peri-wound inflammation
- Bioburden control during grafting with no infection throughout healing
- Pain reduction reported within one week of use (9/10- 2/10)

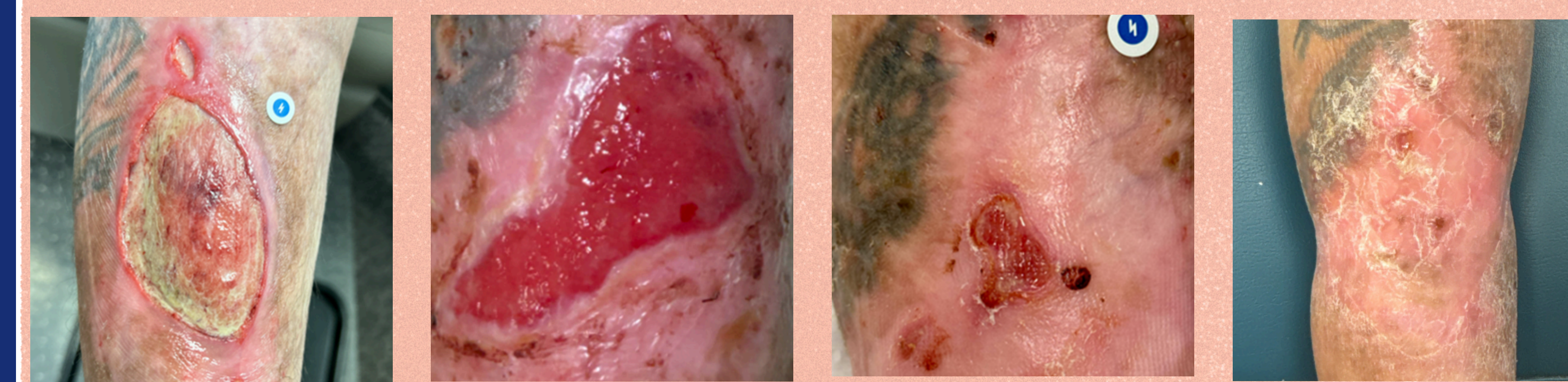


● Case 2 – 64 M, Venous Insufficiency with PG
Chronic venous insufficiency with prior ablation; biopsy-confirmed PG.

Treatment: early copper initiation, Cortrophin, amniotic grafts, and compression

Copper Role:

- Early pain reduction (8/10- 2/10) in one week
- Stabilization of inflammatory wound borders
- Enabled continued compression therapy throughout treatment
- Improved dressing adherence with easy patient use



● Case 3 – 54 F, Venous insufficiency with PG
Chronic venous insufficiency with failed ablation and surgical closure; biopsy-confirmed PG.

Treatment: Copper, Cortrophin, amniotic grafts, and compression.

Copper Role:

- Reduced inflammation
- Prepared wound bed before grafting (established granulating base)
- Improved patient tolerance of compression
- Helped manage exudate during amniotic grafting

Results

Copper-infused dressings provided consistent benefits across all cases:

- Early pain reduction → improved comfort and mobility
- Decreased erythema, warmth, drainage, and periwound fragility → localized anti-inflammatory effect
- Safe with concurrent biologics → no flares or adverse interactions
- Easy to use → supported patient and caregiver adherence
- Progressive epithelialization → accelerated healing
- Reduced hypertrophic scarring compared to typical PG outcomes

Discussion

Copper-infused dressings provide a practical, patient-centered approach for outpatient PG management. Key benefits:

- Early pain reduction
- Peri-wound stabilization
- Compatibility with biologic therapy
- Improved scarring outcomes

These findings highlight copper dressings' value in contemporary PG care. Further prospective studies are needed to define their role in long-term management.

References

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*Medical copper dressing used in the above cases, it was not a sponsor of this project.

29

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