

Matrix Encapsulated Cationic Nano-Particles Change Wound Environment in Favor of Healing for Chronic 10-year Non-Healing Venous Wound with Entrenched Biofilm and Infection

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AIM

Chronic Wounds often are stalled in their healing due to unaddressed chronic biofilm at the wound surfaces. Resistant to antimicrobial agents, bacteria containing biofilms engender a chronic inflammatory response at the wound surface. Hence, anti-biofilm agents that specifically penetrate and kill biofilm pathogens can significantly reverse wound chronicity and lead to final healing.

We herein present a case of a woman with a 10 year-old chronic, painful, recalcitrant ankle venous insufficiency ulcer (VLU) treated with a novel combination of a Nanoparticle (NP) cation matrix* with a thermoreversible tri-block polymer hydrogel** containing the antimicrobial Octenidine (OCT).

METHOD

After an initial two week treatment with a compounded antimicrobial cream (plus compression), therapy switched to the NP cationic matrix* combined with the polymer hydrogel** every other day at home with weekly clinic debridements. After 3 weeks of noticeable improvement and pain reduction, treatment with only the hydrogel and compression was continued.

RESULTS / DISCUSSION

In just 12-weeks of treatment the recalcitrant VLU significantly improved and essentially healed with complete resolution of pain. After failing numerous prior therapies including skin grafting, this wound healed with the addition of these highly effective, non-cytotoxic anti-biofilm cationic agents.

CONCLUSION

This case study mirrors many other successful wounds healed with this proprietary combination of a NP cation matrix* with a thermoreversible polymer hydrogel** containing Octenidine. This new technology incorporating an abundance of cationic charges as well as heavy molecular weight poloxamers directly disrupts the biofilm matrix, effectively killing associated pathogens, and prevents biofilm regrowth.

*AgFresh®, Fentonite® (McCord Research – mccordresearch.com)

**BioRelease® (McCord Research – mccordresearch.com)

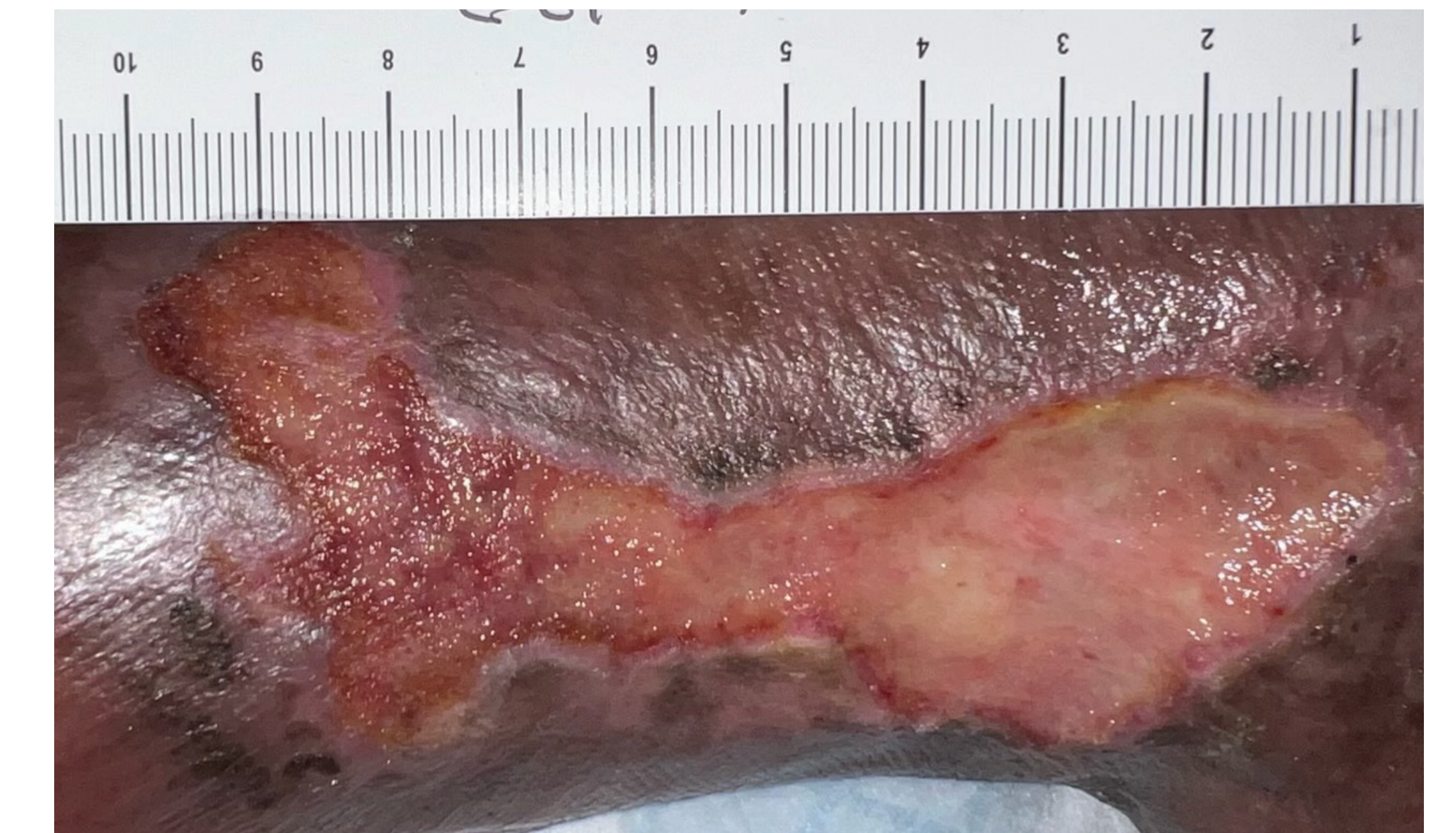
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8/29/23



PATIENT ECONOMIC STUDY

New Treatment Protocol:

The patient was changed to:

BioRelease

Fentonite (AgFresh)

The wounds were cleaned, and dressings were changed 3x a week.

MJP is an elderly female with a venous stasis ulcer that has been treated for ten years but has had no significant improvement. It was also excruciating, and she developed stricture of the Achilles tendon.33

Previous costs and treatments lasted ten years:

1. Office Visits: \$57,040
2. Home Healthcare: \$220,000
3. Debridement Costs: \$77,000
4. Product Cost: \$66,000

Approximate total: \$420,040

Costs After 12 Weeks of Treatment

1. Office Visits: \$1,488
2. Home Healthcare: \$6,000
3. Debridement: \$1,500
4. Product Cost: \$600

Approximate total: \$9,588

The original treatment was 1.15x more expensive per month than the McCord System, and the McCord System healed 43x faster!



Saguaro Wound Care Clinic

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