Hypochlorous Acid Enabled Soft Debridement Speeds Healing of Refractory Venous Leg Ulcers - simplicity, low cost and patient comfort are advantages.

Problem
Refractory venous leg ulcers (VLUs) (treatment > 9 weeks) referred to our clinic appear to result from either ineffective elastic compression or ineffective mechanical debridement of biofilm bacteria. Stasis-related bacterial enzymes and inflammatory mediators that halt growth of healing or interfere with healing mechanisms, include protease, soft tissue necrosis and pain are compliant with elastic compression. (1, 2, 3)

Hypochlorous acid (HOCI) is synthesized by leucocytes to kill bacteria after phagocytosis. (3) Pharmacodynamic bactericidal concentrations of HOCI release bacteria to sequestered cells. HOCI is a small molecule, efficiently intraepidermal peroxidase (topical to biofilm bacteria. (4)

We observed that a week cloth saturated with HOCI is concentrated in 250 ppm to a "neutral" wound surface after 8 to 10 minutes contact time. HOCI wash with keratinocytes containing DNA, RNA, Ktach, stimulated and promoted healing structural body to "soft" wound tissue, dry necrosis and biofilm on paraffin granulation tissue. (5) Additionally, we observed that HOCI softening appears to decrease the pain of debridement of granulating tissue. (6) We report a novel debridement technique. HOCI enabled mechanical soft wound debridement with hot cloth.

Methods
When HOCI saturated (7) soft cloth was used in concert with longitudinal fibrinolytic compression (***) (44) three layer dressings to treat five refractory VLUs.

Results
All VLU healed. Photographs document healing and illustrate soft debridement technique. Cost and patient comfort is discussed.

Conclusions
Hypochlorous acid enabled very soft "debridement" of refractory VLUs appears to be easy to perform, comfortable, inexpensive and therapeutic for healing refractory VLUs.

References

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