The Use of a Formulated Collagen Gel (2.6%) in Diabetic Foot Ulcers

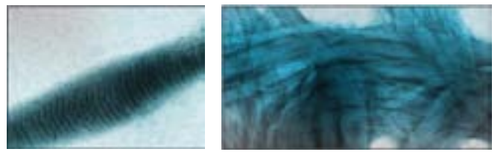
Howard Myles Kimmel DPM, MBA, FACFAS

Senior Clinical Instructor, Case Western Reserve University School of Medicine, Cleveland, Ohio

INTRODUCTION

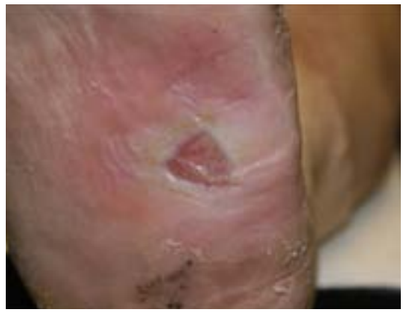
A newly introduced topical formulated 2.6% fibrillar Type I bovine collagen gel functions as an acellular biological modulator to support granulation tissue growth. It contains collagen fibrils consisting of uniformly staggered arrays of triple helical, telopeptide-deleted, tropocollagen molecules. These linear arrays form a flowable biocompatible and bioactive structural matrix that promotes chemotaxis, cellular adhesion, migration and proliferation to stimulate granulation tissue formation. Formulated collagen gel (2.6%) has been shown to activate human platelets, triggering the release of Platelet-Derived Growth Factor (PDGF).

Magnification: 21,000X **Magnification: 6,500X**

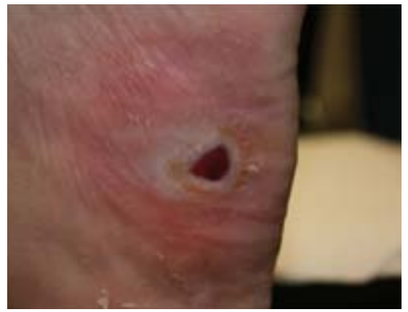


Electron Microscopy of 2.6% Formulated Fibrillar Collagen

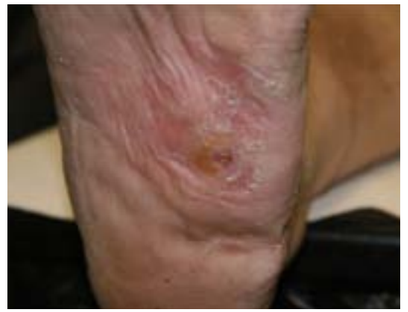
Patient Demographic Data	
Age	63
Sex	Female
General Health Status	Obese, Insulin Dependent Diabetes Mellitus
Prior Treatment and Duration	Debridement, Off-Loading, Silvadene and 8 weeks duration
Decrease in Wound Size at 2 weeks and at 4 weeks	2 weeks 40% 4 weeks 100%



Day of First Application



Week 2, Prior to 2nd Application



Week 4

CONCLUSIONS

Much research has been done on the use of collagen in wounds and in the production of wound dressings. Besides the various types of collagen, it can be found in many forms such as cross-linked vs. non cross-linked or denatured vs. non-denatured. Formulated collagen gel (2.6%) is non-denatured and non cross-linked and has the ability to have PDGF bind to it to help the migration of human dermal fibroblasts. It is activated by a small amount of blood in the wound. Due to the fact that the collagen is not cross-linked it has the ability to participate in the regeneration of skin. Formulated collagen gel (2.6%) is a WOUND HEALING product not a wound care product.

From a clinical stand point, formulated collagen gel (2.6%) "jump starts" a wound and takes it out of the chronic state of inflammation. The results by Blume et al., have been reproduced by this small study. There is enough scientific evidence to show that formulated collagen gel (2.6%) works fast and efficiently. Even though there are only a few clinical studies, the results are very encouraging . It will only be a matter of time that this product will be a major player in the market.

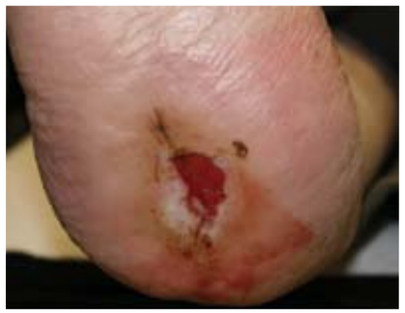
OBJECTIVES/METHODS

The wound care professional faces many dilemmas when treating the chronic unhealed wound. The cases that are presented followed an evidence based algorithm for treatment and in spite of that, the ulcers did not heal. It was decided to use a wound healing product, formulated collagen gel (2.6%), to get these wounds to heal.

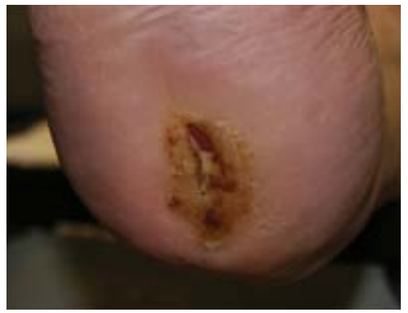
The method of treatment was as follows:

1. The wounds were free of infection.
2. Sharp debridement was done with a scalpel to remove any hyperkeratotic tissue and cause a small amount of bleeding.
3. 0.5ml (1 applicator) of a formulated collagen gel (2.6%) was applied to the wound.
4. A telfa pad was applied directly over the wound followed by a roll of non-conforming gauze.
5. Proper off-loading was performed.
6. The patient returned at 2 weeks for examination and re-application of the formulated collagen gel (2.6%).

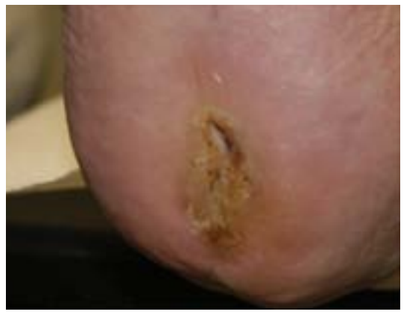
Patient Demographic Data	
Age	55
Sex	Female
General Health Status	Charcot, Insulin Dependent Diabetes Mellitus
Prior Treatment and Duration	Surgical Debridement/Partial Calcanectomy, Non-Weightbearing, Dermagraft and 40 weeks duration
Decrease in Wound Size at 2 weeks and at 4 weeks	2 Weeks = 60% and 4 Weeks= 80%



Day of First Application



Week 2, Prior to 2nd Application



Week 4

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CARDIUM TISSUE REPAIR COMPANY

12255 El Camino Real
Suite 250
San Diego, CA 92130
Tel: (858) 436-1000
Fax: (858) 436-1001
www.cardiumthx.com

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