A prospective, clinical in-market evaluation to assess the performance of a new collagen matrix dressing on facilitating granulation and epidermal migration, in a variety of wound types

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**Background**

Wound healing involves a well-orchestrated, complex process leading to repair of injured tissues. Chronic wounds do not follow this normal pattern of repair. This is due to various identified key factors: leading to disruption of the wound healing process, such as underlying diseases (DM, PVG, Venous disease), infection/colitization, malnutrition and smoking among others. A chronic wound can be defined as a wound in which the normal process of healing has been disrupted at one or more points in the phases of haemostasis, inflammation, proliferation and remodeling. Frequently, these wounds are in a chronic pro-inflammatory state, and thus are in a persistent inflammatory phase, leading to increased levels of MMPs (Matrix Metalloproteinase). The relatively new concept of Wound Bed Preparation (WBP) addresses this issue and provides a model that is appropriate for understanding and treating chronic wounds.

**Methodology**

Wound Bed Preparation aims to accelerate the endogenous healing process or to facilitate other therapeutic measures. The goals of wound healing are not only to remove barriers to healing, but also to actively promote healing. Collagen dressings support WBP by helping to restore the biochemical imbalance that is associated with the extracellular matrix (ECM) in chronic wounds. They act as a sacrificial substrate for MMP’s, which can impede the formation of granulation tissue and epidermal migration.

The aim of our evaluation was to assess the performance of a new collagen matrix dressing on facilitating granulation and epidermal migration. A total of 7 patients have been enrolled into the evaluation to date. Two case histories are presented below that demonstrate the efficacy and product performance characteristics of the new collagen matrix dressing.

**Conclusion**

Often wounds can appear “stuck” at a certain phase in the healing cascade leading to failure to heal. Both wounds in our case series had been managed appropriately, and were relatively clean and granulating, but without neo-epithelialization. The introduction of a new positive factor to healing, in the form of a collagen matrix dressing with silver, may have helped to expedite the formation of granulation tissue and epidermal migration in both cases. The dressing was easy to apply and remove, was comfortable for the patient during wear and was fully incorporated at dressing removal. The collagen matrix dressing has exceeded expectations with regard to the progress of the wounds in both cases.

**Case Histories**

*Case History 1: Patient A*

- **Patient A** is a 39-year-old male who attended our wound clinic with a medical history of diabetes mellitus (DM), spina bifida, and lymphedema. The patient is also urinary incontinent and has a foley catheter in place. He presented with an ulcer of 5 months duration on the plantar aspect of his left heel.
- Image 1: 7-30-07. Initiation of new collagen matrix dressing with silver and continuation of multi-layer compression bandaging. Ulcer measured 3cm x 3cm with 10% slough.
- Image 2: 8-2-07. Ulcer measured 2.0cm x 1.5cm. 100% granulation.
- Image 3: 8-6-07. Ulcer measured 1.8cm x 1.4cm. 100% granulation tissue.
- Image 4: 8-13-07. Ulcer measured 1.0cm x 0.8cm. 100% granulation.
- Image 5: 8-16-07. Ulcer measured 0.4cm x 0.5cm.

*Case History 2: Patient B*

- **Patient B. A 49-year-old lady who presented with radiation skin burn on the lower lumbar region which has been present for over 18 months.
- Image 1. Initial presentation on 2-9-06.
- Image 2. 9-20-07. Introduction of new collagen matrix dressing with silver and continuation of multi-layer compression bandaging. Ulcer measured 3cm x 3cm with 10% slough.
- Image 3. 9-24-07. Dramatic improvement within 4 days. Ulcer measured 1.0cm x 1.5cm.

*References*

*BIOSTEP™ Ag Collagen Matrix Dressing with Silver – Smith & Nephew Wound Management Inc., Largo, Fl.
*PROFORE™ multilayer compression bandaging system – Smith & Nephew Wound Management Inc., Largo, FL.