Clinical Case Report

Dehisced DFU

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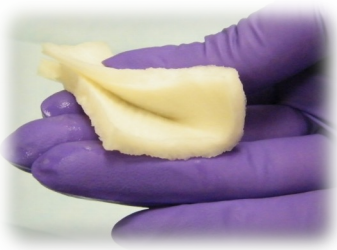

bio-ConneKt®

Wound Matrix

MLM Biologics Inc.

bio-ConneKt® Wound Matrix

Dehisced Diabetic Wound

A Case Report

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ABSTRACT

A 53 year-old patient presented to the office with a foot abscess stemming from stepping on an object. The abscess formed in part secondary to this patient being an uncontrolled diabetic with his most recent Hemaglobin A1c reported at 13.7. Patient was taken to the surgical theater and incision, drainage, and amputation of the 3rd digit along with the metatarsal was performed. The patient was left with a large dorsal foot wound that measures 8cm x 3cm x 2cm that probed to the plantar foot. After multiple irrigation and debridements were performed, the patient underwent a xeno-collagen ECM application in conjunction with wound VAC and IV antibiotics for 2 weeks.

Due to lack of signs of wound closure, the **bio-ConneKt® Wound Matrix**, a FDA–cleared ECM-based advanced wound care dressing, was used as an alternate option. After additional sharp debridement, the product was cut to fit the wound that measured 5.5 x 1 x 0.7 cm. In 4 weeks complete wound closure with epithelialization was achieved. The **bio-ConneKt® Wound Matrix** is engineered to help close chronic wounds in combination with standards of care by meeting the challenges presented in the wound microenvironment.

HISTORY

Past Medical History: A 53 year-old male with PMH significant for uncontrolled Insulin Dependent Diabetes Melitus, Hypertension, and Diabetic Neuropathy. Patient also suffered from lymphedema to the leg secondary to severe infection and surgery. Patient is a non-smoker and denies alcohol and drug use.

PE includes: Patient presented to the office with a severe diabetic foot infection and gas gangrene on xray imaging. The foot had a plantar wound in the area of the 3rd metatarsal and appeared to be a puncture wound. The 3rd digit was cool to touch and blue in color. There was a copious amount of foul smelling drainage expressed from the wound. Patient had complete loss of protective sensation per neurological exam. Pedal pulses were palpable.

Initial Wound Presentation

TREATMENT

Surgical procedure: Immediate incision was performed in the office with flush irrigation, bacterial culture and wound packing. He was immediately sent to the Emergency Department where he was admitted and taken to the operating theater that evening. An incision and drainage of the abscess was performed and all non-viable tissue was debrided including the 3rd digit and metatarsal. Patient had a PICC line placed and was discharged home 5 days post-op for home wound care and antibiotics. Over the next 4 weeks three separate irrigation and debridement procedures were performed. Due to substantial tissue loss a wound VAC was used to promote granulation.

01/11/16: Wound measured 5.5 x 1 x 0.7 cm. Following sharp excisional debridement in the office, a bio-ConneKt® Wound Matrix graft was trimmed to fit the wound and secured with Steri-Strips. The matrix readily absorbed the blood from the wound bed. Compression dressing (Unna Boot) was applied, and weekly secondary dressing change advised.

02/10/16: At 4 weeks during dressing change the peri-wound area showed remarkable normalcy (from the prior inflamed appearance. Remnant bio-ConneKt was still present, adhered in wound bed. When peeled back, the wound showed filling with granulation and epithelialization.

02/20/16: At 6 weeks complete wound closure with epithelialization was seen. The wound closed without excess scar formation .

Day 0 – Procedure Day

4 weeks post bio-ConneKt

6 weeks – Full closure

Dr. Bednarz's concluding remarks:

" This patient risked foot amputation secondary to non-compliance in management of his diabetes. Employing aggressive surgical procedures, IV antibiotics and use of wound VAC in conjunction with ECM grafts resulted in the excellent outcome: saving his foot from amputation. While in my past experience I would have needed multiple wound matrix grafts to achieve closure, using ***bio-ConneKt® Wound Matrix*** *enabled me to achieve the result with just* ***ONE*** *application. Both the patient and I appreciate the medical-economic benefits of this product. "*

bio-ConneKt® Wound Matrix

5 Differentiating Features

The bio-ConneKt® Wound Matrix is a next generation, all biologic, FDA 510(k) cleared wound dressing. It is comprised of reconstituted Type I collagen that is stabilized, sterilized to SAL 10^{-6}, and stored at room temperature.

- **Hydrophilic scaffold to facilitate rapid fluid absorption (0.5cc per sq. cm. of surface area)**
- **Stabilized collagen to prevent premature digestion in wound bed**
- **Porous matrix to enable optimal host cell infiltration**
- **Easily conformable to ensure maximum contact with wound bed**
- **Material designed to minimize repeat applications**

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