

Necrotic DFU

A Case Report

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ABSTRACT

A 67 year-old male presented with ulceration of the plantar 1st metatarsal head. Biomechanically he presented with gastroc-soleal equinus and a rigid first ray secondary to the contraction of the peroneal longus. Surgery was performed to lengthen the gastroc complex and a tenotomy was performed to the peroneal longus. In the post-operative process, the surgical wound healed with no complication. However, the patient applied a tight dressing bandage to the foot resulting in a necrotic ulceration to the lateral 5th metatarsal head.

In order to facilitate wound closure, the **bio-ConneKt® Wound Matrix**, a FDA-cleared ECM-based advanced wound care dressing, was used as a treatment option. The **bio-ConneKt® Wound Matrix** is engineered to help close chronic wounds in combination with standards of care by meeting the challenges presented in a diabetic wound microenvironment. After aggressive sharp debridement, the product was secured to the wound that measured 2.7 x 2 x 0.3 cm. In 6 weeks complete wound closure with full epithelialization was achieved. A combination of diabetic and pressure wound poses a even more demanding physiological environment for healing to occur. The mechanical and biochemical attributes of the **bio-ConneKt® Wound Matrix** enabled optimal maintenance of the wound bed in a healing mode.

HISTORY

Past Medical History: Patient medical history was positive for Insulin Dependent Diabetes Mellitus, CAD, PVD, HTN. He smoked 3 cigarettes per day and demonstrated complete loss of protective sensation to the bilateral lower extremities to the level of the distal 1/3 of the tibia.

PE includes: General physical exam was negative. Vascular exam demonstrated palpable pedal pulses and immediate capillary refill time. Initially, the left foot had a plantar ulceration to the 1st Metatarsal head. During the post-operative period for the initial wound, he developed a lateral 5th metatarsal head ulceration with necrotic tissue. Wound measured 2.7cm x 2cm x 0.3cm.



Initial Wound Presentation

TREATMENT

Surgical procedure: Excisional wound debridement was performed followed by application of bio-ConneKt® Wound Matrix to the wound bed. Steri-Strips secured the graft intact and a Unna Boot was applied. Post-op dressing was applied and patient was allowed to weight bear in a CAM boot. Following a post-op observation on day #3, weekly dressing changes were performed and the Steri-Strips and graft were left intact.

At weekly dressing changes, antimicrobial silver was applied over the Steri-Strips to minimize infection, and Unna boot was continued for edema control.

6 weeks: With minimal standard of care follow-up, the wound healed completely with healthy epithelialization.

Day 0 – Procedure Day



6 weeks – Full closure



Dr. Bednarz's concluding remarks:

*" A complicated wound resulting from both metabolic (diabetes) and physical (pressure) etiologies require specialized care to effect closure. The **bio-ConneKt® Wound Matrix** enabled me to achieve the result with just **ONE** application with minimal post procedural care. "*

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