

# Case Study Report

## MicroMatrix® and Cytal® Wound Matrix 6-Layer devices facilitate closure of severe scalp degloving wound

**Age:** 27 **Sex:** Male

**ACell Product(s) Used:** MicroMatrix and Cytal Wound Matrix 6-Layer.

**Outcome:** Following management with MicroMatrix and Cytal Wound Matrix, patient was discharged at 23 hours and wound closed on post-op day 48. The patient was not readmitted.

### Management of Wound

The wound was cleaned and MicroMatrix and Cytal Wound Matrix 6-layer devices were applied bedside. No operative intervention was conducted. The wound was dressed with a non-adherent dressing, hydrogel, a bulky gauze bandage, and an occlusive outer layer. Patient was discharged at 23 hours.



**Figure 1.** Patient presents with 8 cm x 9 cm full-thickness wound of the forehead and scalp following a motor vehicle accident.



**Figure 2.** Wound is managed with 500 mg of MicroMatrix and one 7 cm x 10 cm Cytal Wound Matrix 6-Layer device.



**Figure 3.** Post-application Day 20.

### Clinical Presentation and Case Background

A 27-year-old male patient presented with a full-thickness degloving wound to the forehead following an unrestrained motor vehicle accident. The injury measured approximately 72 cm<sup>2</sup>. The patient was triaged at a community hospital and subsequently transferred to a Level 1 trauma center for management.



Figure 4. Post-application Day 34.



Figure 5. Post-application Day 48; epithelialization evident.

### Outcome of Management and Follow-up

Following discharge, the dressings were retained until the first patient follow-up visit at day 20. Neither home healthcare nor concomitant wound therapies (e.g. Negative Pressure Wound Therapy) were utilized. Without further ACell product usage or autologous skin grafting, the patient went on to achieve full wound closure by day 48.

### Why this Patient was a Candidate for ACell Product

Upon assessment by the treating physician, it was determined that a rotational flap, free flap, or negative pressure therapy may be too invasive for wound management due to location of injury. Application of ACell wound products allowed the treating physician to manage the wound bedside with minimal follow-up required.

### ACell Product Summary

500 mg of MicroMatrix and one 7 cm x 10 cm Cytal Wound Matrix 6-Layer device were applied to cover the full-thickness wound following a light, non-operative debridement. There were no subsequent applications of ACell wound products.

### Source

This case was managed by Catherine Ronaghan, MD, at University Medical Center in Lubbock, Texas, USA. Dr. Ronaghan is a board certified general surgeon and surgical oncologist.



Figure 6. Post-application Day 61; continuous remodeling.

**Note:** The data presented here contain the opinions of and personal techniques practiced by the treating physician(s). The techniques presented herein are for informational purposes only. The decision of which techniques to use in a particular clinical application lies with the treating physician(s) based on patient profile, particular circumstances surrounding the procedure, and previous clinical experiences.

**Note:** MatriStem® Wound Matrix devices were rebranded as Cytal Wound Matrix devices in January 2016.

**Note:** Cytal Wound Matrix devices are composed of a porcine-derived extracellular matrix, also known as Urinary Bladder Matrix. The devices are supplied in multi-layer sheet configurations (including 1-Layer, 2-Layer, 3-Layer, & 6-Layer) in sizes up to 10cm x 15cm. Cytal Wound Matrix is intended for the management of wounds including: partial and full-thickness wounds, pressure ulcers, venous ulcers, diabetic ulcers, chronic vascular ulcers, tunnel/undermined wounds, surgical wounds (donor sites/grfts, post-Mohs surgery, post-laser surgery, podiatric, wound dehiscence), trauma wounds (abrasions, lacerations, second-degree burns, and skin tears), and draining wounds. The device is intended for one-time use.

**Note:** MicroMatrix devices are composed of a porcine-derived extracellular matrix, also known as Urinary Bladder Matrix. The devices are supplied in a particulate form in quantities up to 1,000mg. MicroMatrix is intended for the management of wounds including: partial and full-thickness wounds, pressure ulcers, venous ulcers, diabetic ulcers, chronic vascular ulcers, tunnel/undermined wounds, surgical wounds (donor sites/grfts, post-Mohs surgery, post-laser surgery, podiatric, wound dehiscence), trauma wounds (abrasions, lacerations, second-degree burns, and skin tears), and draining wounds. The device is intended for one-time use.



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