

Management of a High-Tension Scalp Vertex Defect Using Lyophilized Human Amnion Chorion Membrane Following Mohs Micrographic Surgery: A Case Report

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SAWC Spring 2026

Introduction

Mohs micrographic surgery (MMS) is the gold standard for treating nonmelanoma **skin cancers**, offering high cure rates while preserving healthy tissue. However, **vertex scalp defects** can present healing challenges due to limited tissue mobility, high tension, and reduced vascularity, particularly in elderly patients with atrophic skin or multiple comorbidities, where traditional closure options may be limited.

Lyophilized human amnion chorion membrane (LHACM) is a biologic scaffold composed of extracellular matrix components derived from amniotic tissue and has been used as an adjunct in the management of complex wounds.

This case report describes the **single** application of LHACM as an adjunct to Standard of Care to a **high-tension vertex scalp** wound following MMS in an elderly patient with multiple comorbidities.

Methods

A retrospective review was performed of a patient who underwent MMS followed by treatment of the surgical defect with LHACM. After confirmation of tumor-free margins, a **single LHACM*** application was placed in full contact with the wound bed immediately post-excision. A standardized postoperative dressing regimen was applied. Healing outcomes were assessed from Day 0 through complete epithelialization. Linear measurements were used to calculate wound surface area (length × width), and percent reduction was determined relative to the initial post-MMS defect size. Qualitative documentation of granulation, epithelialization, and overall healing progression was reviewed until functional closure.

Case Presentation

An **84-year-old man** presented with a 1.2 × 1.2 cm superficial **basal cell carcinoma** on the posterior **vertex scalp** extending into subcutaneous adipose tissue. The lesion had no prior treatment aside from biopsy. His medical history included cardiovascular disease, asthma, and osteoporosis, with prior spine fusion and lower extremity arthroplasties.

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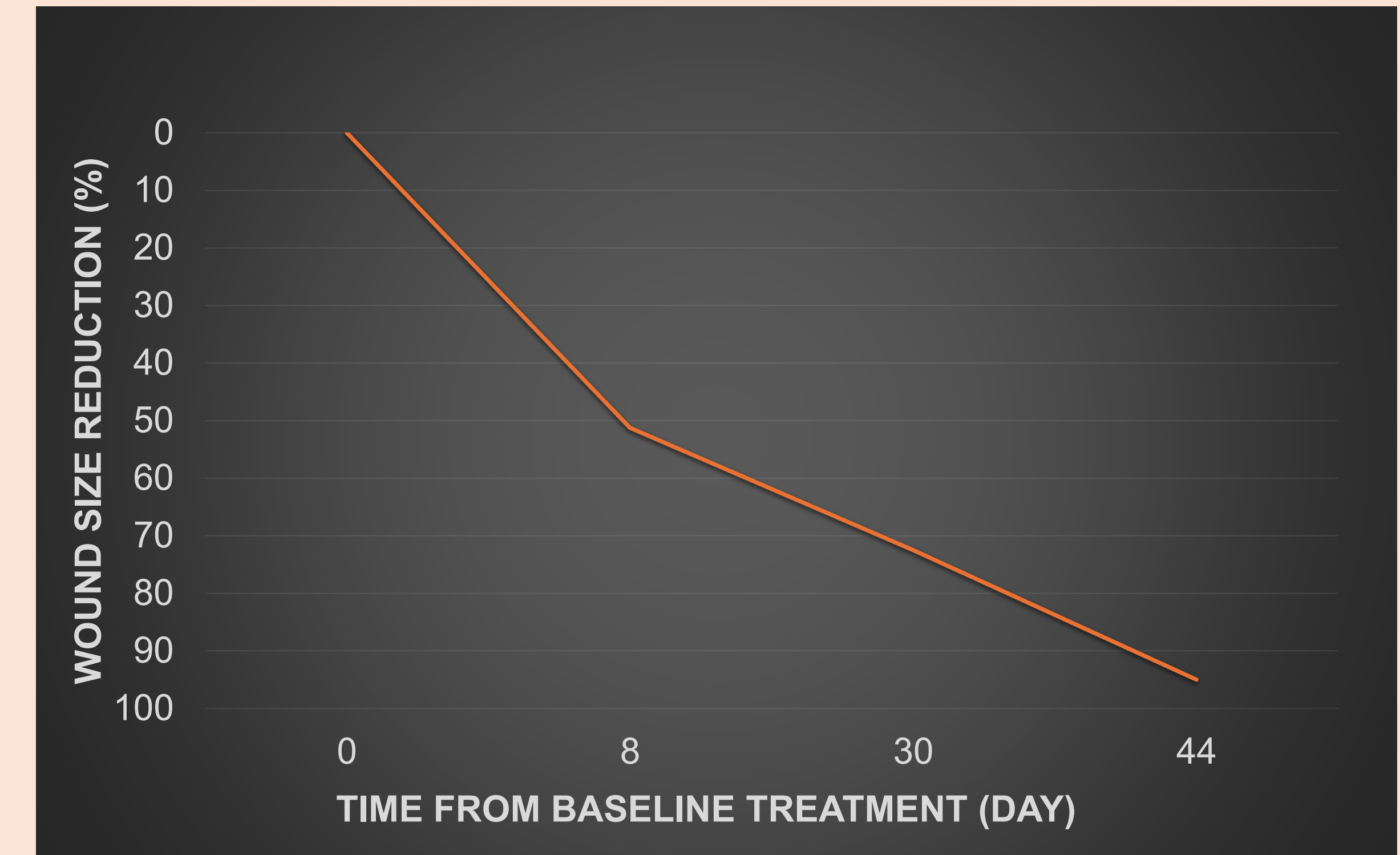
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Case Presentation

MMS required two stages for complete margin clearance, with no residual tumor on final histologic examination. The resulting defect **measured 2.0 × 2.0 cm (4.0 cm²)** and exhibited depth, atrophic surrounding skin, and high vertex scalp tension, rendering primary closure suboptimal.

A **single LHACM** graft was applied directly to the wound bed following tumor clearance.

The wound demonstrated a **51.3% reduction** in surface area at early follow-up and **72.5% reduction at one month**. By approximately six weeks, it was 95% epithelialized, and dressings were discontinued. Healing was uncomplicated, and the patient tolerated treatment well.



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Pre-Mohs defect measuring 1.2 x 1.2 cm



Day 0: Post-Mohs defect measuring 2.0 × 2.0 cm



Day 8



Day 30



Day 44: Near-complete epithelialization (~95%)

Conclusion

This case demonstrates that a **single** application of **LHACM** supported healing of a **high-tension vertex scalp defect** following MMS. These findings suggest LHACM may be a **useful adjunct in select post-Mohs wounds**. Further study is warranted.