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At-Home, Patient-Applied Collagen–Manuka Honey–Hydroxyapatite Dressing for Post- Mohs Surgical Sites: An Eight-Patient Case Series

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1. Abstract

Non-melanoma skin cancers commonly affect the lower extremities and scalp, where Mohs micrographic surgery (MMS) often leaves wounds with complex healing challenges due to limited vascularity, thin skin, and patient comorbidities. Secondary intention healing (SIH) remains a standard method but can result in prolonged recovery and suboptimal cosmetic outcomes. This case series evaluated a bioengineered collagen-honey-hydroxyapatite dressing (CHD) applied to eight post-Mohs wounds - five on the lower leg and three on the scalp - managed by SIH. Patients received the CHD through a durable medical equipment (DME) home- delivery model and self-applied the dressing at home per manufacturer guidelines. Healing progression was documented through before-and-after images and assessed qualitatively for granulation, re-volumization, erythema/inflammation, and epithelialization. Across all cases, CHD use was associated with visible wound improvement, including reduced depth, increased granulation tissue, diminished redness, and progressive closure, even in wounds with exposed fascia or periosteum. These real-world findings suggest that the CHD supports effective healing in post-Mohs surgical wounds managed by SIH and that the DME model improves accessibility and adherence among MMS patients. The CHD represents a practical, cost-effective, and patient- centered solution for enhancing wound outcomes in dermatologic surgery.

2. Introduction

The lower extremities and sun-exposed areas of the scalp, face, and ears are frequent sites for non-melanoma skin cancers, particularly in older adults. These regions often undergo Mohs micrographic surgery (MMS), a tissue-sparing technique that allows precise excision of cancerous cells while preserving as much healthy tissue as possible. Despite its benefits, MMS frequently results in post-surgical wounds that present complex healing challenges, especially on the lower legs and scalp [1,2]. The standard approach for many of these wounds is secondary intention healing (SIH), which involves leaving the wound open to heal naturally. While SIH can yield acceptable results in some cases, it may also lead to prolonged healing times, discomfort, and aesthetically suboptimal outcomes [3]. VERIS™ (SweetBio, Inc., Memphis, TN) is a bioengineered wound dressing composed of a collagen derivative, medical-grade Mānuka honey, and hydroxyapatite, designed to support healing in complex wound environments. This collagen-honey-hydroxyapatite dressing (CHD) has demonstrated enhanced healing in chronic, traumatic, and post-Mohs wounds [4-8]. In vitro studies further support the CHD's ability to reduce bacterial load, decrease harmful matrix metalloproteinases (MMPs), and increase tissue-regenerative growth factors-key elements in optimizing the wound microenvironment [9-11]. To increase access to this advanced care, the CHD is distributed through a durable medical equipment (DME) model, allowing physicians to prescribe the product and have it shipped directly to the patient's home. Covered by Medicare and commercial insurances as a wound supply, this model reduces costs, time to treatment, and the need for repeated in-clinic dressing changes, especially valuable for elderly or mobility-limited patients. The following cases visually highlight the wound healing progress achieved with the CHD in real-world post-Mohs settings. Through direct patient application and home delivery, this treatment model offers a compelling technology for dermatologic surgeons seeking affordable, effective, accessible healing strategies.

3. Materials and Methods

Eight patients underwent MMS for non-melanoma skin cancer, resulting in wounds of varying depths that were managed using advanced SIH. Postoperatively, each patient received home delivery of the collagen-honey-hydroxyapatite dressing (CHD) through a DME supplier. Patients were instructed to apply the CHD according to the manufacturer's guidelines, which included hydrating and placing the dressing onto the wound bed, followed by coverage with a secondary dressing. These eight patients represented typical Mohs surgery candidates - individuals aged 65 years or older, both male and female. Comorbidities reflected those commonly seen in a standard Mohs surgery clinic, including diabetes, smoking, venous stasis, hypertension, and potentially other conditions known to impair optimal wound healing. Before-and-after images were obtained to visually assess healing progress for wounds on the leg (five patients) and scalp (three patients) treated with the CHD dressing. The analysis focused on qualitative indicators of healing, including granulation, re-volumization, reduction in erythema and inflammation, and epithelialization leading to wound closure.

4. Results

Figures 1 and 2 show wound healing progression after MMS on the lower leg and scalp, respectively. Several wounds had significant depth, exposing underlying tissue layers such as fascia, muscle, and periosteum. Independent of location and dimensions, all wounds significantly progressed from the first image (post-op/early timepoint) to the last image (near wound closure). Each wound demonstrated significant re-volumization, evidenced by granulation tissue formation that reduced wound depth until nearly flush with the surrounding skin. Additionally, decreased erythema and inflammation were observed through reduced redness, along with increased healthy granulation marked by pink tissue growth and progressive epithelialization reflected in smaller wound dimensions over time.

Figure 1: Images depicting wound healing progression of five lower leg sites after MMS.

Figure 2: Images depicting wound healing progression of three scalp sites after MMS.

5. Discussion

This case series demonstrates that the CHD can support consistent early healing in post-Mohs surgical wounds managed by secondary intention. Despite anatomical complexity and variation in patient health status, all eight wounds exhibited visual signs of progress, including granulation, volume restoration, reduced erythema/inflammation, and epithelialization. These outcomes were observed without surgical closure or adjunctive therapies, suggesting that the CHD may offer meaningful support to the body's natural wound healing process, even in patients with comorbidities that traditionally inhibit wound healing [12].

The ability of the CHD to visibly reduce wound depth and promote healthy granulation across diverse wound types is clinically relevant. Several wounds presented with exposed tissue such as fascia or periosteum, scenarios typically associated with prolonged healing or reconstructive intervention. Yet, these cases progressed toward closure with topical management alone, underscoring the potential of CHD to serve as a frontline dressing in post-surgical sites. Patient adherence and usability are also noteworthy. Delivered through a DME model, the CHD was applied by patients or caregivers at home. This reduced dependence on frequent clinic visits or home health services, which can be burdensome for older patients or those in rural areas. Additionally, the dressing's coverage as a wound supply by Medicare and private insurers eliminates a common cost barrier to advanced wound care.

While this analysis is limited by its retrospective nature, smaller sample size, and lack of quantitative measurements, the consistency of visual improvements across all wounds provides support for the CHD in post-MMS wounds healing by secondary intention. Future studies should include standardized wound assessments, healing timelines, and comparisons to SIH alone, existing dressings, or autografting techniques to validate these findings and inform treatment algorithms.

6. Conclusion

The collagen-honey-hydroxyapatite dressing demonstrated consistent support for wound healing after Mohs surgery, promoting granulation, re-volumization, and epithelialization. These results suggest it may serve as a valuable product for advanced secondary intention healing in dermatologic surgery. Its ability to restore tissue volume and reduce inflammation across wounds of varying depth indicates a strong regenerative influence within the wound microenvironment. Incorporating this dressing into standard post-Mohs protocols may enhance outcomes and reduce the need for more invasive grafting. The ease of home application and insurance-covered accessibility also empower patients to actively participate in their healing process, reducing the burden of frequent clinic visits and improving overall care continuity.

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