Dehydrated Human Amnion/Chorion Membrane as Adjunctive Therapy in the Treatment of Pyoderma Gangrenosum: A Case Report

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Abstract

Pyoderma gangrenosum (PG) is an uncommon chronic and progressive skin disorder of unknown etiology that can lead to severe tissue necrosis, pathergy, horrendous pain, and disfigurement. PG is often a diagnosis of exclusion, as there are no specific laboratory or histopathologic findings to confirm the diagnosis. Long term immunosuppression is the mainstay of systemic treatment for PG, although increasing evidence supports the use of biologic therapies, such as tumor necrosis factor (TNF)-α inhibitors, for refractory cases of PG.

Purpose

We present a case of a elderly female with refractory, painful PG treated with dHACM.

Case

• 77 year old female with chief complaint of severely painful lesions (10/10) on her right anterior shin.

• History of diabetes mellitus, hypertension, hyperlipidemia, macular degeneration, microalbuminuria, venous insufficiency, obesity, three vessel coronary artery bypass graft, right hip replacement, and right femur fracture with internal fixation, and left shoulder surgery.

• Physical exam revealed three ulcerative lesions at the posterior aspect of the right anterior shin. The copiously draining wounds showed no signs of infection and did not probe to bone. For three months prior to utilization of adjunctive advanced topical therapeutics (dHACM), her PG was managed by a multidisciplinary medical team with immunosuppressive therapy, local wound care, and light compression.

Case History

Therapies such as dehydrated human amnion/chorion membrane (dHACM) allografts have been employed for a number of clinical applications for over a century. The molecular fabric of this tissue provides a matrix for cellular migration and proliferation, modulates inflammation, reduces scar tissue, has antibacterial properties, and reduces pain at the site of wound formation, pain abated, and reepithelialization. Eight months after application of dHACM.

Results

Wound area reduction
Within one week of dHACM placement, her wound reduced in size by over 25%, and within two months the wound had reduced by 56%. The wound was fully healed by eight months. Figure 1 shows the progression of wounds during the course of treatment. Note that after application of dHACM on 1/4/2015 a marked decrease in wound size occurred.

Pain reduction
After the first dHACM placement, the patient stated her pain, recorded as 10/10, was substantially reduced within hours (5/10), and within 5 days was subsequently eradicated (0/10).

References


2. Lehtinen P. Pyoderma gangrenosum. This condition is not contagious, but its diagnosis may be challenging. Wound Care & Ostomy C. 0-6:321-227; 1979.


Figure 1: Wound Size Over Time (cm²)

Conclusions

• These results suggest that using dHACM as an adjunct to immunosuppressive therapy may serve to mitigate pain and improve wound healing in patients with this challenging condition.

• Reduction of pain should be evaluated in studies of dHACM to determine if these results are reproducible in a larger cohort of patients and therefore generalizable to other wound types and conditions.