Human Placental Connective Tissue Matrix in the Treatment of Complex Wounds: A Case Series
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Introduction
Amniotic membrane-derived products have been used in the treatment of burns for over 100 years. More recently, their use in the management of complex chronic wounds has exploded. These products form a scaffolding of attachment proteins with a variety of growth factors that enhance endogenous cellular entrapment and proliferation.

In this case series, we evaluated the use of a graft comprised of a particularized pad of Human Placental Connective Tissue Matrix (HPCTM™) in the treatment of notoriously complex wounds. This graft was used as an adjuvant to aggressive surgical debridement with negative-pressure therapy (when necessary).

Methods
This case series evaluated the use of HPCTM™ in 3 patients with complex wound types requiring inpatient care including: A chronic open wound of the leg, a dorsal foot burn, and a Fournier gangrene. The wounds were first aggressively debrided and then approximately 8 cm² of HPCTM™ was applied per 10 cm² of wound surface area. Foam dressing with negative pressure therapy was subsequently applied for 3-4 days. This application regimen was repeated until the formation of granulation tissue was visible. A meshed autologous split thickness graft was then applied (if needed) over the HPCTM™ and the wound was left to complete the healing process.

Conclusions
All patients demonstrated complete healing and the use of HPCTM™ increased granulation tissue deposition and expedited healing time as compared to experience using the same procedure without the use of HPCTM™. The use of HPCTM™ as a particularized pad in conjunction with negative pressure therapy and split-thickness grafting embedded the HPCTM™ into the wound allowing for quicker incorporation and healing.

Discussion
The use of HPCTM™ in conjunction with aggressive sharp debridement, negative pressure therapy, and split-thickness skin grafting (as necessary) appears to hasten the healing time of notoriously difficult to manage wounds. HPCTM™ appears to improve the abundance and quality of granulation tissue in the wound bed, thus leading to faster healing times.

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