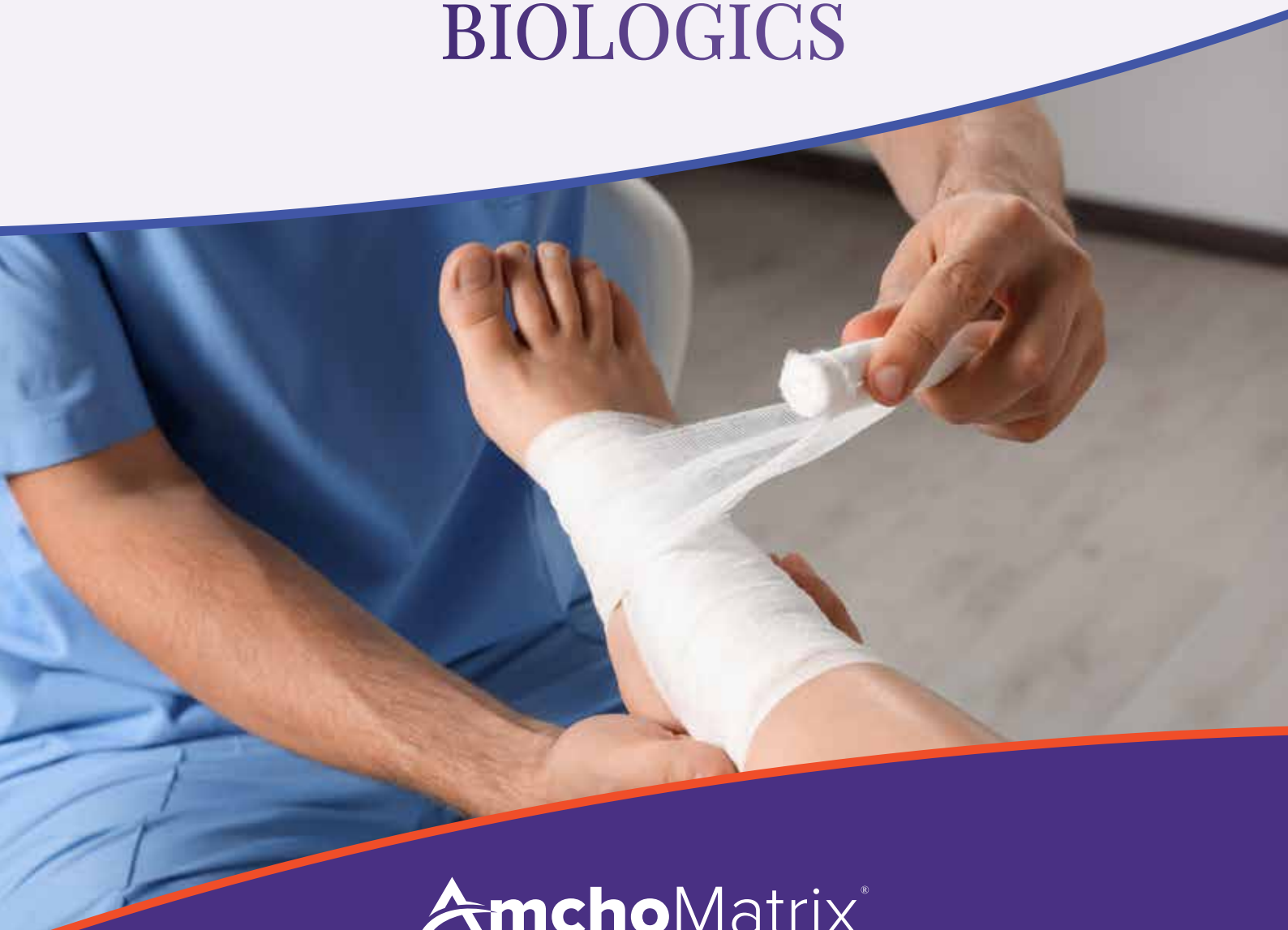
CELLUTION BIOLOGICS



AmchoMatrix®

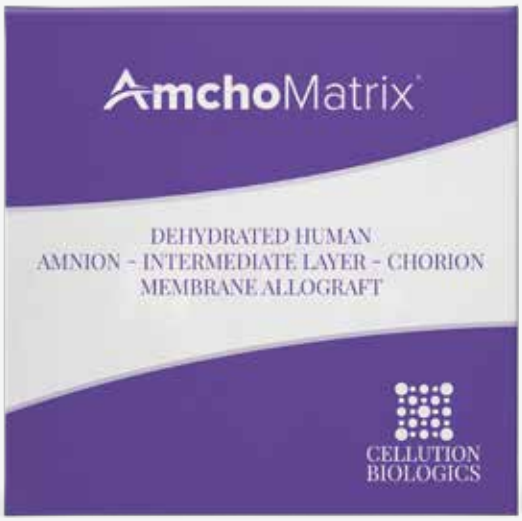
Sterile dehydrated Human
Amnion - Intermediate Layer - Chorion
Membrane Allograft
dHAICM

Clinical **Review** and Case **Studies**

AmchoMatrix

AmchoMatrix is a sterile, minimally manipulated, dehydrated human amnion, intermediate layer, and chorion membrane allograft derived from the human placental tissues of consenting donors.
This dehydrated allograft is processed aseptically and gamma sterilized.

ADVANTAGES OF AmchoMatrix



1. Easy to use
2. Simple, single-step rehydration
3. Optimized sizes for different needs
4. Easy determination of orientation
5. Compatible with Compression Therapy, Negative Pressure Wound Therapy (NPWT), and Hyperbaric Oxygen Therapy (HBOT)
6. Terminally sterilized
7. Produced using AGNES proprietary processing method that preserves the structural integrity of the ECM and the quality of growth factors found in native placental tissue.
8. Long shelf life of 3 years
9. Can be stored at room temperature for off-the-shelf convenience

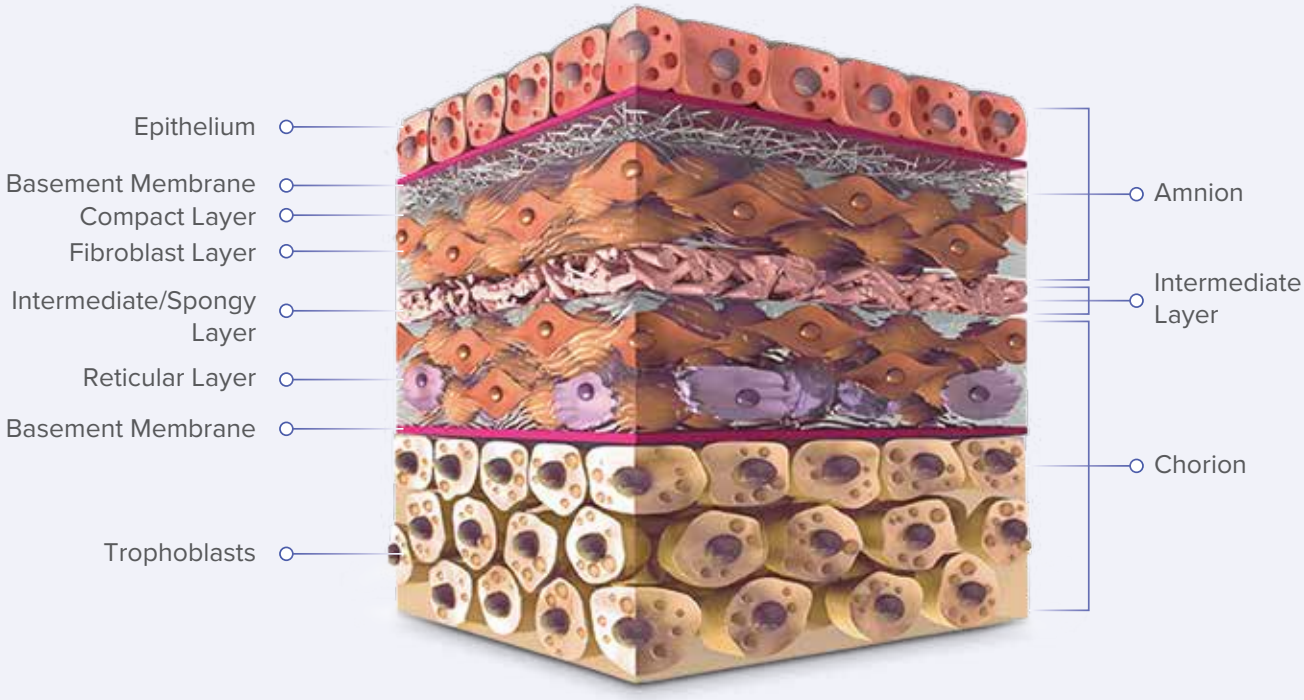
KNOWN PRESENCE OF GROWTH FACTORS & CYTOKINES IN THE EXTRACELLULAR MATRIX OF HUMAN PLACENTAL TISSUE AND THEIR FUNCTIONS:

Growth Factors and Cytokines	Native Function	AmchoMatrix
IL-1ra, IL-4, IL-6, IL-10	Anti-Inflammatory	✔
VEGF	Angiogenic	✔
bFGF		✔
TGF-Beta		✔
PDGF		✔
EGF		✔
IGF-1	Cell Proliferation and Remodeling	✔
KGF		✔
MIP	Anti-Bacterial	✔

AGNES PROCESSING TECHNOLOGY

The proprietary AGNES Processing Technology retains the spongy layer along with the amnion and chorion layers and preserves the inherent biological components of native placental tissue.

- Structural components: collagen I, III, IV; elastin
- Cell-binding domains: fibronectin, collagen V, VII; hyaluronic acid
- ECM binding domains: proteoglycans, laminin
- 300+ regulatory proteins

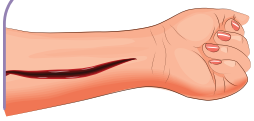


CLINICAL USES

Acute and Chronic Wounds

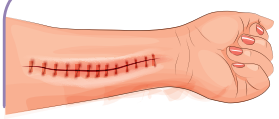
Diabetic Foot Ulcers

Venous Ulcers



Post-Traumatic Wounds

Pressure Ulcers



Surgical Wounds

CASE STUDIES:

EXPLORE THE EFFICACY OF AMCHOMATRIX THROUGH THE FOLLOWING CASE STUDIES:

DIABETIC FOOT ULCER:

INTRODUCTION:

Poorly controlled diabetes mellitus often leads to diabetic foot ulcers, a prevalent complication resulting from factors such as inadequate glycemic control, neuropathy, peripheral vascular disease, or insufficient foot care. These ulcers frequently cause osteomyelitis and lower extremity amputations, typically occurring in areas of the foot subject to repetitive trauma and pressure. Staphylococcus commonly infects these ulcers, which tend to be chronic.

An interprofessional approach involving podiatrists, endocrinologists, primary care physicians, vascular surgeons, and infectious disease specialists yields the best outcomes. This scenario is commonly encountered in both outpatient and inpatient settings.

Diabetic foot ulcers are a leading cause of hospital admissions among diabetic complications and contribute significantly to non-traumatic amputations in the US. Approximately 5% of patients with diabetes mellitus develop foot ulcers, with 1% ultimately requiring amputation.

Successfully treating these ulcers demands a careful and innovative approach to wound care. Amid the urgency of addressing these complex wounds, amniotic membrane therapy stands out as a promising solution, utilizing regenerative properties to improve healing in diabetic foot ulcers (DFUs). This brief study delves into the effectiveness of amniotic membrane therapy on DFUs, providing a comprehensive evaluation of its efficacy. Through detailed case analyses, this study aims to significantly contribute to the discussion on advanced interventions for treating diabetic foot ulcers, emphasizing the need for deeper insights to enhance patient outcomes.

STUDY DESIGN:

This research comprised a case series including four patients diagnosed with DFUs, who underwent treatment with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allograft. The treatment regimen consisted of debridement followed by routine wound irrigation and application of dHAICM every five days. Each application was then carefully secured with a suitable moisture-retaining dressing to ensure the allograft remained in place and effective.

CASE REPORTS

ULCERS ON DORSAL SURFACE

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 62-year-old man with diabetes mellitus presented to the clinic with a chronic, non-healing diabetic foot ulcer (7.5 cm x 5 cm in size) on the dorsal side of the left foot which persisted for 9 weeks. A nail prick caused the wound in between the third and the fourth toe. He reported increasing pain, redness and discharge despite treatment with conventional wound care measures, including regular dressing changes, offloading, and antibiotic therapy for 4 weeks.

Wound Treatment with AmchoMatrix: dHAICM was applied on the patient every 5 days till complete closure of the ulcer was achieved. A total of 8 dHAICM's were applied. 1st and 2nd applications were 7cm x 4cm in size, 3rd and 4th applications were 6cm x 4cm in size, 5th and 6th applications were 3cm x 3cm in size, 7th and 8th applications were 2cm x 2cm in size. Pain, redness and discharge reportedly diminished. No complications were reported.

CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 52-year-old man with diabetes mellitus presented to the clinic with a chronic, non-healing diabetic foot ulcer (8cm x 7cm in size) on the dorsal side of the right foot which initially resulted from farming related injury, and persisted for the past 10 weeks. He reported increasing pain, redness and discharge despite treatment with conventional wound care measures, including regular dressing changes, offloading, and antibiotic therapy for 6 weeks.

Wound Treatment with AmchoMatrix: dHAICM was applied on the patient every 5 days till complete closure of the ulcer was achieved. A total of 8 dHAICM's were applied, 1st and 2nd applications were 7cm x 7cm in size, 3rd and 4th were 5cm x 5cm in size, 5th and 6th were 3cm x 3cm in size, 7th and 8th were 2cm x 2cm in size. Pain, redness and discharge reportedly diminished. No complications were reported.ia

CASE STUDY 3:

Patient History, Diagnosis & Initial Treatment: A 58-year-old male presented to the clinic with a non-healing ulcer (7.5cm x 5cm in size) on the dorsal aspect of the left foot. The patient had a history of diabetes mellitus and varicose veins. He reported increasing pain, redness and discharge despite treatment with conventional wound care measures, including regular dressing changes, offloading, and antibiotic therapy for 4 weeks.

Wound Treatment with AmchoMatrix: He received an application of dHAICM every 7 days till complete closure of the ulcer was achieved. A total of 8 dHAICM's were applied, 1st application was 7.5cm x 5cm in size, 2nd application was 7cm x 5cm in size, 3rd and 4th application was 6cm x 4.5cm in size, 5th and 6th application were 4.5cm x 2.5cm in size, 7th application was of 4cm x 2cm in size, 8th was of 4cm x 2cm in size. Pain, redness and discharge reportedly diminished. No complications were reported.

ULCERS ON PLANTAR SURFACE

INTRODUCTION: Diabetic foot ulcers on the weight-bearing sole (plantar region) present unique challenges compared to those on the non-weight-bearing surface (dorsal region). Constant pressure and mechanical stress during walking delay healing, compounded by reduced blood flow in the plantar area. These factors create a challenging microenvironment, hindering optimal wound healing.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 54-year-old woman with type 1 diabetes mellitus presented to the clinic with a chronic, non-healing diabetic foot ulcer (2.2cm x 1.5cm in size) on the heel of the left foot which persisted for 16 weeks. She reported increasing pain, redness and discharge despite treatment with conventional wound care measures, including regular dressing changes, offloading, and antibiotic therapy.

Wound Treatment with AmchoMatrix: dHAICM was applied on the patient every 5 days till complete closure of the ulcer was achieved. A total of 5 dHAICM's of the size 2cm x 2cm were applied. Pain and redness subsided. No complications were reported.

CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 70-year-old man with type 1 diabetes mellitus presented to the clinic with a chronic, non-healing diabetic foot ulcer (1.5cm x 1cm in size) on the plantar surface of the hallux of left foot, which persisted for the past 16 weeks. He reported increasing pain, redness and discharge despite treatment with conventional wound care measures, including regular dressing changes, offloading, and antibiotic therapy.

Wound Treatment with AmchoMatrix: dHAICM was applied on the patient every 5 days till complete closure of the ulcer was achieved. A total of 3 dHAICM's of the size 18mm diameter disks were applied. Pain and redness subsided. No complications were reported.

RESULTS: All wounds were observed to be completely closed one week after the final application of dHAICM. The required number of applications varied between three and eight, averaging at six applications. During the healing process, changes included decreased redness, increased formation of granulation tissue, partial re-epithelialization, and eventual complete coverage of the wound with a thin layer of fragile, pink-colored skin. Additionally, reductions in pain and discharge were observed. No adverse events or severe side effects related to dHAICM were reported, and there has been no recurrence in any patients for six months.

DISCUSSION: This case series demonstrates that incorporating dHAICM with standard care can accelerate the closure of diabetic wounds and prevent complications. Wound closure time with dHAICM was notably shorter compared to traditional methods, particularly for wounds persisting for 9-16 weeks with no improvement before dHAICM application. dHAICM usage could reduce prolonged healing time and associated healthcare expenses. Further research through randomized controlled trials is necessary for a thorough assessment of its effectiveness compared to conventional approaches.

FASCIOTOMY FOR COMPARTMENT SYNDROME

INTRODUCTION: Compartment syndrome, marked by elevated pressure within a closed anatomical space, poses a serious threat to tissue health and function. Fasciotomy, a surgical procedure aimed at relieving this pressure, is vital and often life-saving. However, post-fasciotomy care presents new challenges, including wound management and complications. Exploring innovative interventions is crucial in this context. Amniotic membrane therapy shows promise in addressing various aspects of wound healing, inflammation, and tissue regeneration. This case study investigates the application of amniotic membrane therapy in post-fasciotomy care, focusing on its effects on wound healing, inflammation reduction, and complication prevention. Through specific cases and outcomes, the study provides valuable insights into improving post-fasciotomy care. This exploration emphasizes the importance of advancing therapeutic approaches to enhance the quality of care and functional recovery in individuals undergoing fasciotomy for compartment syndrome.

STUDY DESIGN: In this case series, two patients underwent treatment with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allograft after fasciotomy. The treatment plan involved meticulous debridement, routine wound irrigation, and (dHAICM) application every five days until the wounds healed. Each application was carefully secured with a suitable moisture-retaining dressing to prevent allograft displacement.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 43-year-old man presented with escalating pain, swelling and erythema in his right lower extremity, one week after undergoing fasciotomy for acute compartment syndrome. The fasciotomy site measured 8 cm x 6 cm in size.

Wound Treatment with AmchoMatrix: Surgical debridement preceded the application of dHAICM at the incision site. dHAICM was applied on the patient every 5 days. There were a total of 8 dHAICM applications, 1st and 2nd applications were 8cm x 6cm in size, 3rd and 4th were 6cm x 4cm in size, 5th and 6th were 5cm x 3cm in size, 7th and 8th were 3cm x 2cm in size. After the last application of dHAICM, complete wound closure was achieved, pain and swelling subsided. No complications were reported.

CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 50-year-old man presented with escalating pain, swelling and erythema in his left lower extremity, one week after undergoing fasciotomy for acute compartment syndrome, The fasciotomy site measured 8cm x 2cm in size. Incision site displayed signs of cellulitis, including local warmth, redness and swelling.

Wound Treatment with AmchoMatrix: Surgical debridement preceded the application of dHAICM at the incision site. dHAICM was applied on the patient every 5 days. There were a total of 6 dHAICM applications. 1st and 2nd applications were 2 allografts (4cm x 2cm in size), 3rd and 4th were 2 allograft (3cm x 2cm in size), 5th and 6th were of 2 allograft (2cm x 2cm in size). After the last application of dHAICM, complete wound closure was achieved, pain and swelling subsided. No complications were reported.

RESULTS: One week after the last dHAICM application, both Case 1 and Case 2 showed complete wound closure. Case 1 resolved after eight applications, while Case 2 resolved after six applications. Both patients experienced reductions in pain and swelling. The healing process included erythema reduction, granulation tissue formation, patchy re-epithelialization, and eventual coverage by thin, pink skin. No adverse events or severe side effects related to dHAICM were reported in either case.

DISCUSSION: This case series underscores the effectiveness of amniotic membrane therapy in improving the treatment of post-fasciotomy wounds in patients with cellulitis and compartment syndrome. The regenerative properties of the amniotic membrane play a crucial role in accelerating wound healing and reducing complications. Amniotic membrane therapy demonstrates potential in addressing the intricate issues of post-fasciotomy care and serves as a valuable addition to standard treatments. Further research and clinical investigation are necessary to fully understand its scope of application and optimize its incorporation into post-surgical care protocols.

RADIATION INDUCED ULCERS

INTRODUCTION: Radiation therapy, a vital tool in cancer treatment, often brings about challenging side effects, particularly radiation-induced ulcers. These ulcers pose a significant concern as they can disrupt therapy, causing pain and treatment delays. Effectively managing these ulcers requires innovative strategies to alleviate pain, expedite wound healing, and enable prompt resumption of radiation therapy.
Amniotic membrane therapy, renowned for its wound healing properties, emerges as a promising solution. This case study explores the use of amniotic membrane in treating radiation-induced ulcers, focusing on its regenerative capabilities and evaluating its effectiveness in healing radiation-induced skin damage.

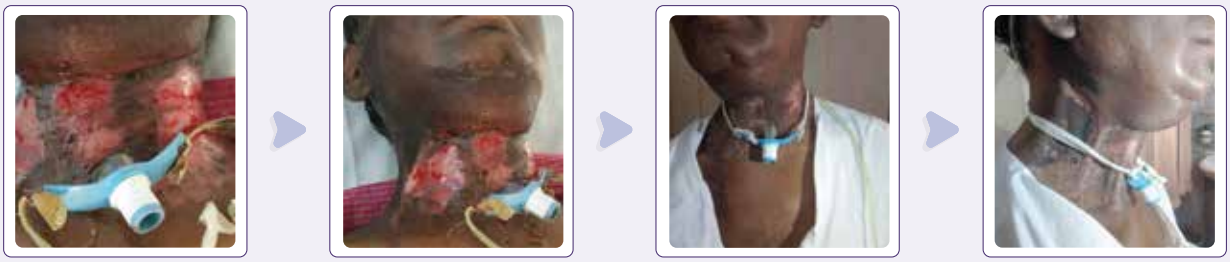
Through meticulous analysis of individual cases, the study aims to enhance current knowledge on managing radiation-induced ulcers and provide deeper insights into the role of amniotic membrane therapy in this specialized context.

STUDY DESIGN: In this case series, two patients with radiation-induced ulcers underwent treatment with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allograft. The treatment protocol included wound irrigation followed by a single application of dHAICM, which was then secured with a dressing to retain moisture and prevent displacement of the allograft.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 53-year-old man with head and neck squamous cell carcinoma (stage IV) undergoing radiation therapy reported gradual onset of pain and skin changes on his neck after 4 cycles of radiation treatment. The radiation therapy had to be stopped.

Wound Treatment with AmchoMatrix: Following a single application of dHAICM measuring 7cm x 4cm in size, the patient attained complete ulcer epithelization within one week, allowing for the resumption of radiation therapy.



CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 62-year-old man with osteosarcoma of spine underwent radiation therapy. After 3 cycles of radiation therapy, he reported gradual onset of pain and skin changes on the upper back within the radiation treatment field, due to which the radiation therapy had to be stopped.

Wound Treatment with AmchoMatrix: Following a single application of an 8cm × 6cm dHAICM, his ulcer completely healed within a week, allowing for the continuation of radiation therapy.

RESULTS: Complete closure of the ulcers occurred one week after applying dHAICM. Notably, each patient only needed one dHAICM application and could resume therapy. The healing process involved erythema reduction, granulation tissue formation, patchy re-epithelialization, and final coverage with a thin layer of delicate, pink-colored skin. No adverse events or severe side effects were reported

DISCUSSION: Radiation-induced skin reactions are common and often inevitable during radiation therapy, as the skin inevitably receives radiation. These reactions can delay radiation therapy, which is concerning. Effective treatment to mitigate these reactions is essential. dHAICM, as shown in this study, is easy to apply, adheres well without adhesives, and is cost-effective. It leads to faster wound healing, shorter hospital stays, fewer dressing changes, and less need for pain relief medication. The use of dHAICM could be valuable in radiation therapy, reducing the severity of skin reactions and ensuring uninterrupted treatment.

POST TRAUMATIC TENDON EXPOSED WOUNDS

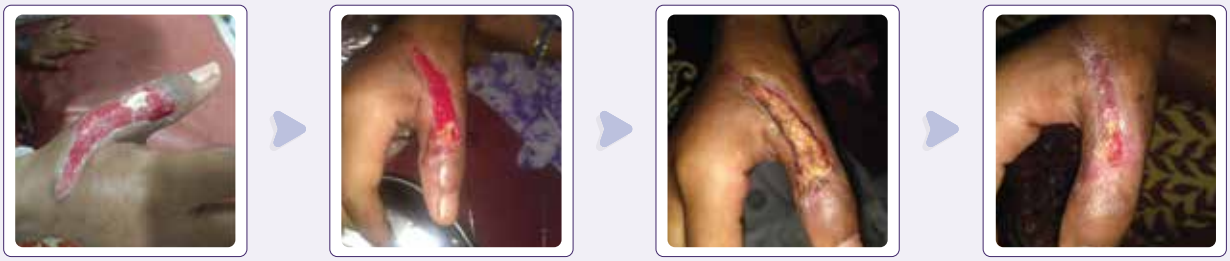
INTRODUCTION: The prevalence of acute wounds and chronic conditions, such as diabetic foot ulcers (DFUs), pressure ulcers, and venous ulcers, is on the rise, with limb skin and soft tissue loss frequently resulting in tendon-exposed wounds. When the tendon becomes exposed due to trauma or infections, the wound becomes highly vulnerable to bacterial contamination, necessitating prompt tendon repair and coverage to prevent serious complications. Amniotic membrane therapy, known for its exceptional regenerative potential, offers a promising approach in wound care.
This case study explores the use of amniotic membrane in treating tendon-exposed wounds, aiming to assess its effectiveness in promoting tendon repair, reducing complications, and improving overall patient outcomes. By analyzing specific cases and their outcomes, this study adds to our understanding of the role of amniotic membrane in addressing the complex challenges associated with tendon-exposed injuries.

STUDY DESIGN: In this case series, two patients with tendon-exposed wounds were treated with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allografts. Following proper wound bed preparation principles, each patient's wound underwent thorough debridement and irrigation before receiving weekly applications of dHAICM. The graft was then secured with an appropriate dressing to retain moisture and prevent displacement.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 26-year-old woman presented with accidental trauma (2 cm x 5 cm in size) to her right thumb, resulting in a laceration exposing extensor tendon. She reported pain, swelling and difficulty in movement.

Wound Treatment with AmchoMatrix: The wound was thoroughly debrided and dHAICM was applied weekly for 3 weeks.
A total of 3 dHAICM applications of size 4cm x 2cm were applied. After the 3rd application of dHAICM, the wound healed with complete coverage of extensor tendon, pain subsided and range of motion was improved. No complications were reported.



CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 52-year-old man presented with accidental trauma (11.8cm x 6cm in size) on the shin of right foot, resulting in the exposure of extensor tendon, causing significant pain and swelling.

Wound Treatment with AmchoMatrix: The wound was thoroughly debrided and dHAICM was applied every 5 days. A total of 8 dHAICM applications were applied, 1st and 2nd applications were 12cm x 6cm in size, 3rd and 4th were 8cm x 6cm in size, 5th and 6th were 7cm x 4cm in size, 7th and 8th were 3cm x 3cm in size. After the last application of dHAICM, the wound healed with complete coverage of extensor tendon, pain and swelling subsided. No complications were reported.

RESULTS: In both cases, complete wound closure was achieved one week after the last dHAICM application. Case 1 was resolved after three dHAICM applications, while Case 2 required eight applications. The healing process involved decreased redness, enhanced formation of granulation tissue, and full re-epithelialization. Additionally, there was a reduction in pain and improved range of motion. No adverse events or severe side effects related to dHAICM were reported in either patient.

DISCUSSION: This case study underscores the effectiveness of amniotic membrane therapy in facilitating the healing of tendon-exposed wounds. The regenerative properties of the amniotic membrane play a crucial role in achieving positive healing results. Consequently, amniotic membrane therapy emerges as a promising treatment option for managing tendon-exposed wounds, providing accelerated healing, pain reduction, and improved function. Further investigation and larger-scale studies are necessary to determine its broader applicability across various traumatic injury situations.

NON-HEALING NEUROPATHIC ULCER

INTRODUCTION: Neuropathic ulcers happen when someone has poor nerve function in their peripheral nervous system and develops pressure points that cause sores on the skin's surface. These ulcers are common, mostly affecting the feet but can happen in other body parts too. They occur because the body's internal structures create pressure points on the skin, especially in areas where there's less feeling due to nerve damage. For example, walking can cause pressure on foot prominences. Since there's reduced sensation, people may not feel pain or notice any issues with the ulcer. To heal faster and prevent serious complications, it's important to recognize and treat neuropathic ulcers early with proven therapies.
Effectively treating neuropathic ulcers requires a meticulous and innovative approach to wound care. Amidst the urgency of addressing these challenging wounds, amniotic membrane therapy emerges as a promising solution, harnessing regenerative properties to enhance healing. This study examines the effectiveness of amniotic membrane therapy in treating these ulcers, offering a thorough assessment of its efficacy. Through detailed case analyses, the study aims to make a significant contribution to the discussion on advanced treatments for neuropathic ulcers, highlighting the importance of gaining deeper insights to improve patient outcomes.

STUDY DESIGN: In this case study, a patient with non-healing neuropathic ulcer was treated with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allografts. Following proper wound bed preparation principles, the patient's wound underwent thorough debridement and irrigation before receiving weekly applications of dHAICM. The graft was then secured with an appropriate dressing to retain moisture and prevent displacement.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 63-year-old man with uncontrolled diabetes mellitus presented to the clinic with a non-healing neuropathic ulcer on the deformed right heel for more than 6 months. The wound was caused due to graft failure. Initial treatment was daily dressing with normal saline along with antibiotic and antidiabetic medications for approximately 3 to 4 weeks. Regular usage of microcellular rubber boots was advised for off-loading throughout the treatment period. Substantial healing of the wound was not observed during the treatment period.

Wound Treatment with AmchoMatrix: The wound was thoroughly debrided and dHAICM was applied every week for 3 weeks. A total of 3 dHAICM applications were applied, 1st application was 3 cm x 1.5 cm in size, 2nd was 2cm x 0.5cm in size, 3rd was 1.5cm x 0.3cm in size.
At the 1st postoperative week, there was epithelialization around the wound bed. Wound measurements for the non healing ulcer(right) were 2cm x 0.5cm and superficial ulcer (left) were 3cm x 1cm. At the 3rd postoperative week, significant wound shrinkage along with marked wound healing was observed.

RESULTS: One week after the last application of dHAICM, complete closure of the ulcer was noted. The case was resolved after three applications of dHAICM. Throughout the healing process, noticeable changes included reduced redness, increased development of granulation tissue, partial re-growth of epithelial cells, and eventual full coverage of the wound with a delicate, pink-colored skin layer. Moreover, a decrease in pain was observed. There were no reported adverse events or severe side effects associated with dHAICM, and the patient has not experienced any recurrence since then.

DISCUSSION: Neurotrophic ulcers, often associated with diabetic neuropathy, pose significant clinical challenges due to impaired wound healing and heightened susceptibility to infection. This case study demonstrates the efficacy of dHAICM in facilitating wound closure and epithelialization, as evidenced by the reduction in ulcer size and significant improvement in healing observed within a relatively short treatment period. Furthermore, the ability of dHAICM to modulate pain and enhance patient comfort is noteworthy, contributing to overall treatment satisfaction and compliance. However, while the initial results are promising, further research is warranted to elucidate the long-term outcomes and comparative effectiveness of dHAICM in the management of neurotrophic ulcers.

VENOUS LEG ULCER

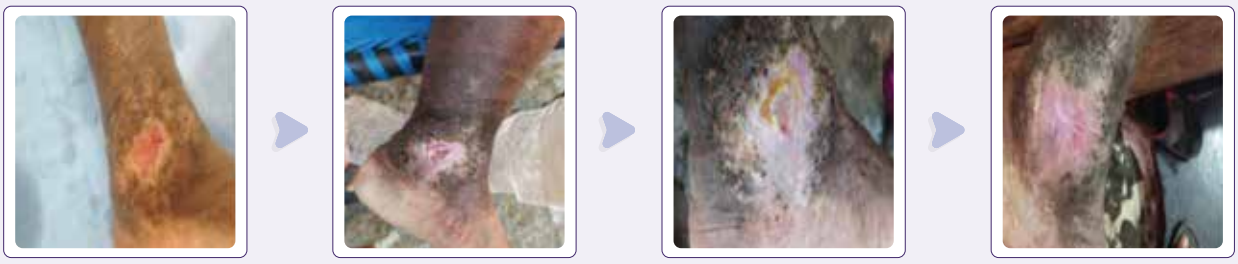
INTRODUCTION: Venous leg ulcers (VLUs) are serious complications of chronic venous insufficiency (CVI) and venous hypertension, especially in older individuals. With the global population aging, the incidence of this condition is increasing worldwide. VLUs occur when there's a problem with blood flow in the veins of the legs, leading to high pressure in the veins and resulting in skin ulcers. These ulcers are a significant burden on health-care systems globally. In the United States alone, the annual cost for treating VLU patients is very high, reaching billions of dollars. As the population ages and becomes more overweight and inactive, the problem is only expected to worsen. To effectively treat venous ulcers, careful and creative wound care methods are needed. Among the urgency of treating these tough wounds, amniotic membrane therapy appears as a hopeful solution, using its regenerative abilities to boost healing. These case studies look at how well amniotic membrane therapy works in treating these ulcers, giving a detailed evaluation of its effectiveness.

STUDY DESIGN: In this case study, a patient with venous leg ulcer was treated with dehydrated human amnion, intermediate layer, chorion membrane (dHAICM) allografts. Following proper wound bed preparation principles, the patient's wound underwent thorough debridement and irrigation before receiving weekly applications of dHAICM. The graft was then secured with an appropriate dressing to retain moisture and prevent displacement.

CASE STUDY 1:

Patient History, Diagnosis & Initial Treatment: A 48-year-old man with a history of varicose veins for 13 years, presented to the clinic with an ulcer on the gaiter area of the left leg. Prior treatments involved daily dressings with normal saline along with compression bandage, but no significant impact on the wound healing process was observed.

Wound Treatment with AmchoMatrix: In addition to standard of care, dHAICM was applied after surgical debridement on a weekly basis for 6 weeks along with compression bandage. A total of 6 dHAICM applications were applied, 1st and 2nd application was 2.7cm x 1.2cm in size, 3rd was 1.2cm x 0.5 cm in size, 4th and 5th was 0.9 cm x 0.5 cm in size. At the 3rd postoperative week, there was significant wound shrinkage. Wound measurements were 1.2cm x 0.5cm. At the 6th postoperative week, complete wound healing along with wound closure was observed.



CASE STUDY 2:

Patient History, Diagnosis & Initial Treatment: A 62-year-old man presented to the clinic with a non-healing venous ulcer at the gaiter area of the left leg lasting 7 months. Prior treatment involved alternate day sterile foam dressing with normal saline for about 3 to 4 weeks. There was no significant improvement.

Wound Treatment with AmchoMatrix: In addition to standard of care, dHAICM was applied after surgical debridement on a weekly basis for 11 weeks along with the non-adherent dressing. A total of 11 dHAICM applications were applied, 1st and 2nd application was 5.5cm × 4cm in size, 3rd was 4cm × 3cm in size, 4th and 5th was 2cm × 2cm in size, 9th application was 1cm × 1cm in size. At the 3rd postoperative week, significant wound epithelialization was observed. Wound measurements were 4cm x 3cm. At the 9th postoperative week, significant wound closure was observed. Wound measurements were 1cm x 1cm. At the 11th postoperative week, complete wound healing and closure was established.

RESULTS: One week after the last dHAICM application, both cases 1 and 2 showed complete wound closure. Ulcer in case 1 healed after six applications, while case 2 healed after eleven applications. Both patients reported reduction in pain. The healing process included erythema reduction, granulation tissue formation, patchy re-epithelialization, and eventual coverage by thin, pink skin. No adverse events or severe side effects related to dHAICM were reported.

DISCUSSION:

Chronic venous ulcers are a significant burden on patients and healthcare systems, characterized by slow healing, high recurrence rates, and associated morbidity. dHAICM offers several potential benefits in this context. This case series illustrates the efficacy of dHAICM in promoting wound healing, as evidenced by the reduction in ulcer size and improvement in healing observed over the treatment period. Moreover, the ability of dHAICM to modulate pain and reduce inflammation can significantly enhance patient comfort and quality of life. However, further research is needed to elucidate the long-term outcomes and comparative effectiveness of dHAICM compared to standard treatments for chronic venous ulcers, such as compression therapy and wound dressings.

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