

Use of Dehydrated Human Amnion/Chorion Membrane Allograft as a Biological Dressing In The Treatment of 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 rapidly increasing. Particularly common among these is skin and soft tissue loss in the limbs leading to tendon-exposed wounds. When exposed, the tendon membrane becomes compromised due to trauma or infections and the wound becomes highly susceptible to bacterial contamination. Thus, a prompt tendon repair and coverage is necessary to prevent serious complications. Amniotic membrane therapy, known for its remarkable regenerative potential, has emerged as a biological approach in wound care. This case study delves into the application of amniotic membrane in the treatment of tendon-exposed wounds. It aims to evaluate its effectiveness in facilitating tendon repair, minimizing complications, and enhancing overall patient outcomes. By examining specific cases and their respective outcomes, this study helps in better understanding of the role of amniotic membrane in managing complex challenges associated with tendon-exposed injuries.

METHODS

This case series involved two patients with tendon-exposed wounds treated with Dehydrated Human Amnion Intermediate Chorion Membrane (DHAICM) allografts. In the spirit of executing good principles of wound bed preparation, each patient's wound was initially thoroughly debrided and irrigated prior to receiving weekly applications of DHAICM. The graft was secured with an appropriate dressing to maintain moisture and prevent allograft displacement.

RESULTS

Complete wound closure in each patient was observed one week after the final DHAICM application. The patient in Case1 resolved following three applications of DHAICM, while the patient in Case2 resolved following eight applications. The healing process included erythema, improved granulation tissue formation and full re-epithelialization. Further, a reduction in pain, accompanied by improved range of motion was documented. No adverse events or severe side effects from DHAICM were reported in either patient.

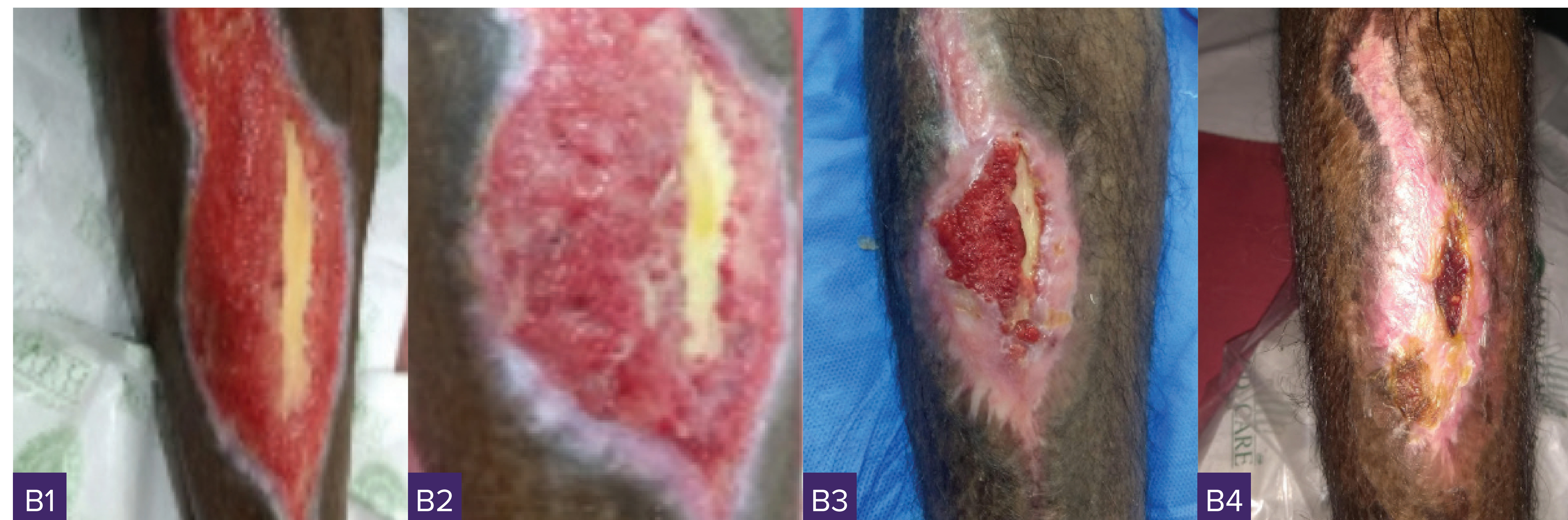
CASE REPORT



Case 1 (Fig : A) : A 26-year-old female patient presented with accidental trauma (2 cm × 5 cm) to her right thumb, resulting in a laceration exposing extensor tendon.

The wound was thoroughly debrided and DHAICM was applied weekly for 3 weeks.

A total of 3 DHAICM applications were utilized. After the 3rd application of DHAICM, the wound healed with complete coverage of the extensor tendon.



Case 2 (Fig : B) : A 52-year-old male patient presented with accidental trauma (11.8cm × 6cm) on the shin of right foot, resulting in the exposure of extensor tendon.

The wound was thoroughly debrided and DHAICM was applied every 5 days.

A total of 8 DHAICM applications were utilized. After the last application of DHAICM, the wound healed with complete coverage of extensor tendon.

DISCUSSION

This case study highlights the efficacy of amniotic membrane therapy in promoting the healing of tendon-exposed wounds. The amniotic membrane's regenerative properties significantly contribute to favorable healing outcomes. Therefore, amniotic membrane therapy stands out as a promising treatment option in the management of tendon-exposed wounds, offering expedited healing, reduction of pain and functional recovery. Further exploration and larger studies are warranted to establish its broader application in diverse traumatic injury scenarios.

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*DHAICM=AmchoPlast (Cellution Biologics, Roswell, GA)

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