

Management of Morel-Lavallee Lesion After Pelvic Internal Fixation

Using Ultra-Thick, Cryopreserved Human Amniotic Membrane Allograft

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Introduction

Pelvic ring injuries are commonly observed following high-energy trauma and are generally managed with internal or external skeletal fixation.^{1,2} Although relatively uncommon, Morel-Lavallee Lesions (MLLs) are closed, degloving injuries that most frequently occur near the pelvis and generally appear within days following the traumatic injury. These lesions are challenging to manage and are a significant risk factor for surgical site infection near the initial repair.^{3,4} As a result, incision sites can break down and lead to large, complex wounds that are difficult to heal. Herein we describe the use of ultra-thick, cryopreserved human amniotic membrane (AM) allografts to expedite wound healing and mitigate complications.⁵⁻⁷

Methods

Case report of a patient who was treated with ultra-thick, cryopreserved AM allografts† for MLL and an infected surgical wound following internal fixation of the posterior pelvis.

Results

A 24-year-old female involved in a motor vehicle accident presented with pelvic ring disruption, bladder rupture, pulmonary contusion, and rib fractures. Pelvic embolization was performed, followed by internal and external fixation of the posterior and anterior pelvis one day later, at which time, a posterior MLL was noted. Multiple incision and drainage procedures were performed, and the posterior incision was noted to be macerated and draining with eschar at day 7. Wound cultures were negative. External fixation was removed in the OR on day 14 followed by drainage of the posterior incision. By Day 17, patient presented with a large wound measuring 18x6.5x4cm (468 cm³) with positive culture of *Enterobacter aerogenes* and *E. cloacae*.

Patient was administered Intravenous antibiotics along with negative pressure wound therapy and wound dressings. Antibiotic beads and two AM allografts† (8x3 cm) were placed on Day 20. Within 7 days, the wound reduced in size to 8.5x9x2.5cm (191 cm³) (FIG. 1A). Incision and drainage was performed again two weeks later (6 weeks) followed by a second application of AM. At 4 months, the patient was ambulating normally and resumed physical activity (FIG. 1B). Robust granulation tissue and progressive epithelialization were noted at 5 months (FIG. 1C), with continued healing observed over 6 and 7 months (FIG. 1D, 1E). By 7.5 months, the wound demonstrated complete epithelialization (FIG. 1E).

†Neox® 1K, BioTissue Holdings Inc, Miami, FL

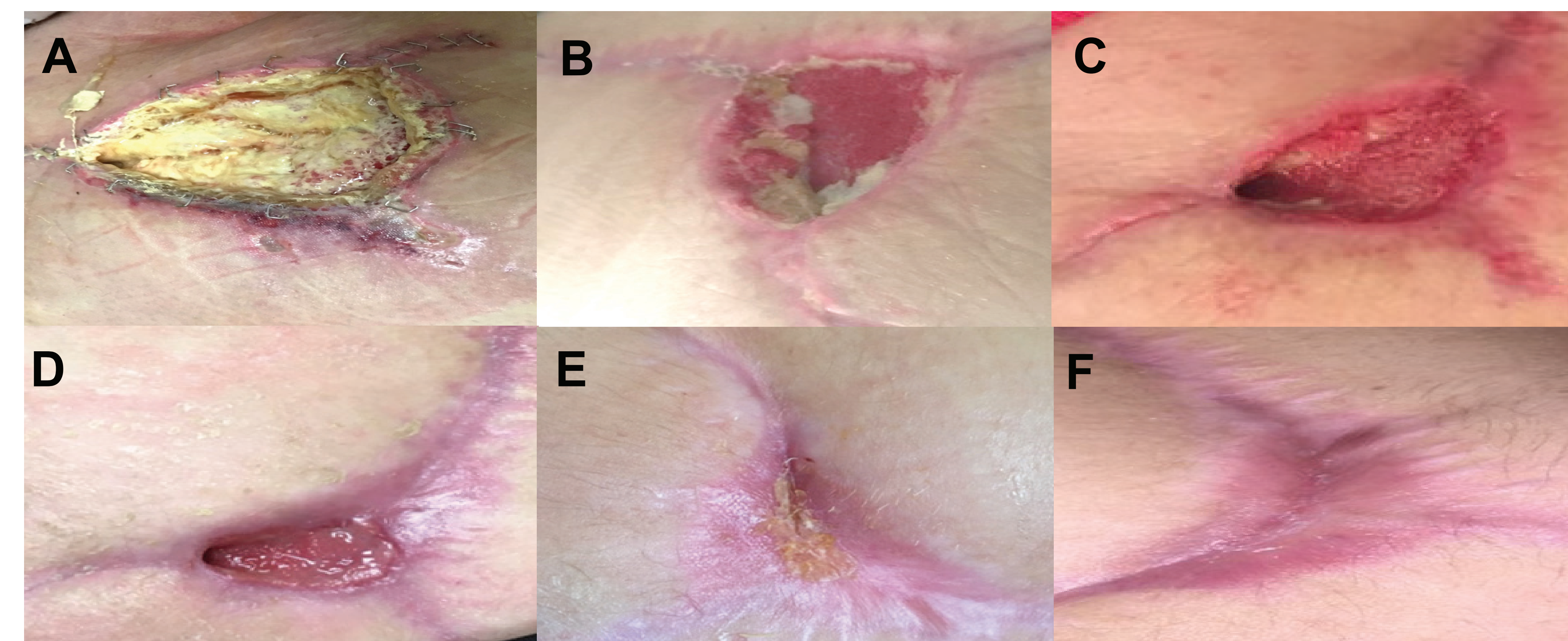


FIG. 1 Wound Epithelialization Over 7.5 Months

Conclusion

Use of AM allograft was shown to support wound closure in the treatment of an infected Morel-Lavallee Lesion following pelvic internal fixation.

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