

Neox[®] 1K for Open Pilon Fracture

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Why This Study Is Relevant

Pilon fractures account for 1-10% of all lower extremity injuries.¹ They can be one of the most difficult fractures to manage due to factors relating to injury of the soft tissue, fracture patterns, and comorbidities.^{1,2} Open pilon fractures have a high risk for major wound complications, including wound dehiscence or infection that can lead to limb loss.³ Even after open reduction and internal fixation (ORIF) surgery for pilon fractures, the patient may still be at risk for additional complications such as impaired union, nonunion, stiffness, post-traumatic arthritis, and persistent pain, all of which can negatively impact quality of life.⁴ Therefore, having a wound management option that helps mitigate complications and expedites healing to enable functional recovery is paramount to optimizing surgical outcomes.

FIG. 1



Case Example

A 54-year-old male who fell 12-14 feet off a ladder presented with Left Grade IIIA open tibial pilon fracture. The patient's wound was debrided twice previously and underwent external fixation, followed by ORIF for definitive stabilization. However, at 6 weeks, the anterior medial side had full-thickness tissue necrosis 3x2.5cm in size.

Treatment Procedure

The necrotic region of the traumatic wound site was debrided, and an 8x3cm Neox[®] 1K cryopreserved, ultra-thick amniotic membrane allograft was placed into the tunneling defect over the exposed bone (FIG 1). Vacuum-assisted closure (VAC) was also utilized for 3 days.

Outcomes

On day 3 post-op, the adjunctive VAC was removed, and the Neox 1K allograft was noted to be partially dissolved (FIG 2A).

By week 6, granulation tissue was observed in the wound bed, and the wound size was significantly reduced (FIG 2B).

Complete wound closure was achieved by month 4 post-op, and no complications (infection, osteomyelitis, persistent pain, or decreased mobility) were encountered. (FIG 2C).

FIG. 2



Surgical Goals

Help mitigate wound complications

Help expedite healing

Help facilitate functional recovery

Neox 1K

Neox 1K is an ultra-thick cryopreserved human amniotic membrane allograft that supports improved wound healing for expedited recovery with fewer applications.³⁻⁴

- Diabetic Foot Ulcers
- Chronic Wounds
- Venous Leg Ulcers
- Arterial Ulcers
- Pressure Ulcers
- Wound Dehiscence
- Burns

Neox 1K can be used with Negative Pressure Wound Therapy (NPWT). The product does not require edge-to-edge wound coverage for it to be effective. The allograft can even be cut into strips and applied to a wound.



Neox 1K Cryopreserved Ultra-Thick Amniotic Membrane Allograft	
Product Code	Size
NX-10-2010	2.0 x 1.0 cm
NX-10-2020	2.0 x 2.0 cm
NX-10-3020	3.0 x 2.0 cm
NX-10-3030	3.0 x 3.0 cm
NX-10-4030	4.0 x 3.0 cm
NX-10-6030	6.0 x 3.0 cm
NX-10-8030	8.0 x 3.0 cm

The BioTissue Difference

Over-37-year commitment to understanding the science behind fetal regenerative healing. The leader in the transformation to becoming a biologics provider.

Manufacturer

Focused on delivering quality amniotic membrane-based allografts, we are the only company with FDA-designation for its unique anti-inflammatory, anti-scarring, and anti-angiogenic properties on the ocular surface.

Tissue Source

Proprietary CryoTek® cryopreservation process shown to preserve more of the key biological components and structural integrity of birth tissue.

Processing

Versatile solution enables cool storage with minimal thawing and the ability to return the product to storage unopened.

Storage

1. Sirkin M, Sanders R. The Treatment of Pilon Fractures. Orthopedic Clinics of North America. 2001;32(1):91-102.
2. Crist BD, Khazzam M, Murtha YM, Della Rocca GJ. Pilon Fractures: Advances in Surgical Management. JAAOS - Journal of the American Academy of Orthopaedic Surgeons. 2011;19(10):612-622.

3. Heiner JA, Banner KA, Wu VJ, et al. The injury characteristics of open pilon fractures predictive of complications. Injury. 2022;53(4):1510-1516. doi:10.1016/j.injury.2022.01.019.
4. Van der Vliet QMJ, Ochen Y, McTague MF, et al. Long-term outcomes after operative treatment for tibial pilon fractures. OTA International. 2019;2(4):e043. doi:10.1097/oi9.000000000000043.

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