Clarix® 100

Case Review
Foot & Ankle Surgery

Use of Adjunctive Clarix® 100 to Promote Healing Post-Hammertoe Correction

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Why this Study is Relevant

Hammertoe correction is the most common lesser toe surgery and is intended to straighten the toe, reduce pain, and improve range of motion. Arthroplasty of the Proximal Interphalangeal Joint (PIPJ) is one of the most frequently performed hammertoe correction procedures.[1-4] However, complications can be common including persistent edema, recurrence of deformity, residual pain and excessive stiffness.[5]

Case Example

A 44-year-old female presented with left foot second- and fifth-digit hammertoes (FIG. 1). She reported having the deformities for many years that caused pain during ambulation. All conservative outpatient therapies were previously attempted but failed to resolve the patient's complaints. Upon physical examination, the patient's 2nd and 5th digit extensor tendon was also noted to be extremely taut. Due to the recalcitrant and chronic state of the abnormality, the patient decided upon surgical treatment.

Treatment Procedure

A local anesthetic was administered in proximal V-block fashion to the left second and fifth digits. A V-Y incision was made over the fifth Metatarsophalangeal Joint (MTPJ) and a long curved S linear incision was made from the 2nd PIPJ to 2nd MTPJ. Blunt dissection was carried out to the level of capsule and a medial capsulotomy was performed on the 2nd MTPJ. Extensor tendon-Z lengthening was achieved using 3-0 Vicryl® sutures and PIPJ arthroplasty was performed with a 0.045 K-wire for both the 2nd and 5th digit. The foot was loaded and improved anatomic alignment was noted. Prior to skin closure for each digit, and after copious irrigation with normal saline, a 2.0 x 2.0cm Clarix 100 was cut and applied subcutaneously (FIG. 2). The skin was then closed with nylon sutures, a local anesthetic block was administered, and Betadine®-soaked Adaptic™ with bulky sterile dressings and light multilayered Ace® compression bandage was applied to the left lower extremity. The patient was administered a post-op cast shoe and was instructed to be non-weight-bearing with crutches.

Outcomes

At 1 week, the post-operative wounds were healthy with no signs of dehiscence (FIG. 3), and the patient reported minimal discomfort that was managed with ibuprofen as needed. Sutures were removed at 2 weeks and the incisions appear healed. Minimal pain and edema was noted. By 4 weeks, all K-wires were removed with minimal discomfort and instructed to ambulate in comfortable shoes to tolerance. At 6 weeks, the patient reported no pain with full range of motion for all left foot digits (FIG. 4). Patient was instructed to return to normal activity. Based on her favorable outcome, patient advised that she would like to perform hammertoe correction on her other foot in the coming months.


FIG. 1

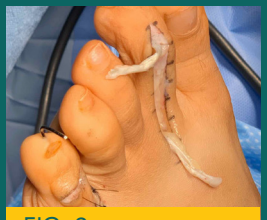


FIG. 2


FIG. 3


FIG. 4

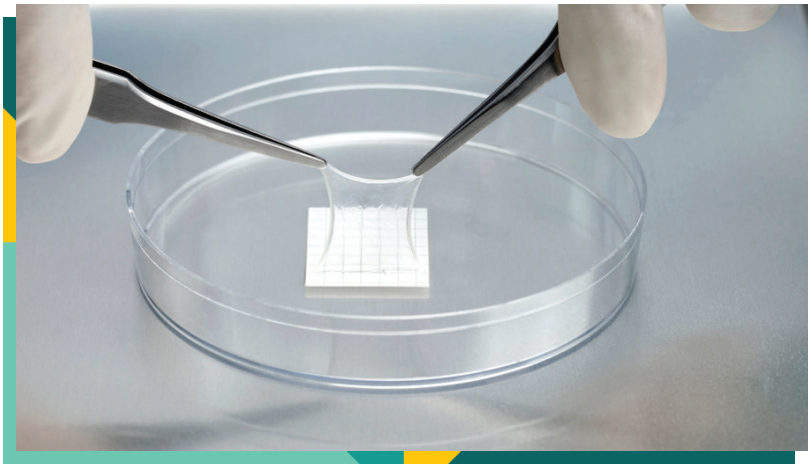
Surgical Goals:

- Help mitigate post-operative discomfort
- Expedite wound healing
- Facilitate rehabilitation and recovery

Clarix 100

Clarix 100 is a cryopreserved amniotic membrane allograft.

- Appropriate for minimally invasive procedures where access and space are anatomically compromised
- For easier handling and application, the allograft is delivered on a non-implantable, gridded paper backing which is removed at the time of application.
- In Foot and Ankle procedures, where the unique anatomy leads to a higher propensity of wound healing complications compared to other orthopedic surgeries due to:[6]
  - Thin layer of soft tissue protection of underlying anatomy
  - Deficient extremity blood flow around the ankle, especially in patients with comorbidities



Clarix 100 Cryopreserved Amniotic Membrane Allograft	
Product Code	Size
CR-02-2020	2.0 x 2.0 cm
CR-02-4040	4.0 x 4.0 cm
CR-02-7070	7.0 x 7.0 cm

The BioTissue Difference

Manufacturer
Over-36-year commitment to understanding the science behind fetal regenerative healing
The leader in the transformation to becoming a biologics provider

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

Tissue Source
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

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

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3. Meyr AJ et al. *J Radiol Case Rep*. 2015;9(6):29-43.
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5. Schuberth J. *J Foot Ankle Surg*. 1999;38(2):166-78.
6. Dalton GP, Wapner KL, Hecht PJ. *Clin Orthop Relat Res*. 2001 Oct;(391):133-9.

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