

Utilization of a Next Generation Decellularized Dermal Allograft to Augment the Repair of a Torn Peroneus Brevis Tendon

Howard M. Kimmel DPM, MBA
Cleveland, OH

Surgical Summary

Clinical Presentation:

- 33-year-old female with comorbidity of obesity presented to the office for a right ankle injury she sustained eight months prior. She stated she was walking on uneven ground and twisted her ankle.
- Standard radiographs at six months post injury revealed no fractures or dislocations. An MRI performed prior to this office visit revealed a split tear of the peroneus brevis tendon beginning at the tip of the lateral malleolus and extending for a length of approximately 4.5 centimeters (Figure 1).
- Conservative treatment consisted of initial weightbearing as tolerated in a CAM walker and then complete non-weightbearing.
- Physical examination revealed significant pain with inversion but no restriction of range of motion and 4+/5 strength. No subluxation was felt.
- Due to failed success of previous conservative measures, she elected to proceed with surgery.



Figure 1. MRI revealed split tear of peroneus brevis tendon.

Intraoperative Findings:

- Exploration revealed a longitudinal split tear of the peroneus brevis tendon consistent with MRI findings and hypertrophic tissue (Figures 2 & 3).
- The tear began at the tip of the lateral malleolus and extended approximately 4.5 centimeters.



Figure 2. Longitudinal tear in the peroneus brevis tendon.



Figure 3. Longitudinal tear in the peroneus brevis tendon.

Surgeon Perspective:

"Studies have shown that DermaPure integrates into the body similar to an autograph. DermaPure was utilized to reinforce the tendon repair. With this patient, I believe the most beneficial aspect was its ability to provide strength to the repair along with anatomical integration."

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Surgical Procedure:

- A modified Ollier's incision was performed and deepened to the peroneal sheath, which was then incised to reveal the tear in the peroneus brevis tendon. The hypertrophic tissue was removed.
- The tendon was repaired and tubularized utilizing Ethibond Excel[®] 2.0 sutures (Figure 4).
- A 3 cm x 4 cm DermaPure[®] decellularized dermal allograft was then wrapped around the tendon to provide reinforcement/augmentation of the repair (Figure 5 & 6).



Figure 5. DermaPure[®] prior to being wrapped around tendon.



Figure 4. Peroneus brevis tendon repaired and tubularized utilizing Ethibond Excel[®] suture.

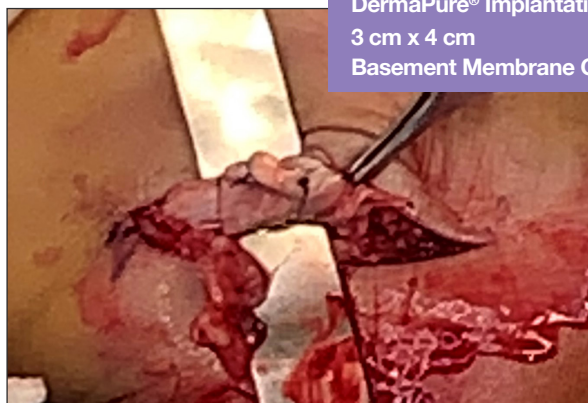


Figure 6. DermaPure[®] sutured to provide reinforcement to peroneus brevis tendon repair.

DermaPure[®] Implantation
3 cm x 4 cm
Basement Membrane Outer-Most

Post-Operative Notes:

- Non-weightbearing for six weeks.
- Physical therapy initiated one month after surgery and continued for three weeks.
- Full recovery with pain-free ambulation and full active and passive range of motion by three months post-op. Pain level of 2/10 when standing for extended periods of time.

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833-567-0767

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