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# Tarsal Tunnel Release

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## Clinical History

15-year-old female diagnosed with tarsal tunnel syndrome. The patient had pain overlying the tibial nerve inferior to the medial malleolus with pain radiating into the plantar foot. Tinel's sign was positive overlying the tarsal tunnel. A corticosteroid injection around the tibial nerve did eliminate all of her pain but her pain and parathesias did return. The patient also did fail NSAID's, orthotics, different shoes and activity modifications.

## XCELLERATE<sup>®</sup>

### Technology Platform

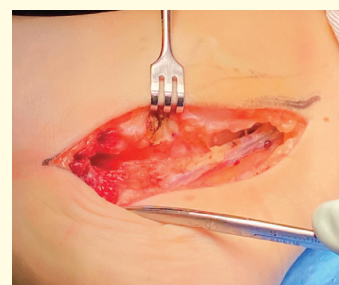
XCELLERATE<sup>™</sup> is opaque and thicker than other grafts. The Lyophilized graft is flexible and easy to handle. What you can't see is the benefit of our proprietary Lyophilization processing focused on preserving the quality of the matrix. The growth factor-rich matrix with an outer basement membrane immediately serves as a natural barrier and supports re-epithelialization.

### Procedure

- A curvilinear incision is made along the posteromedial border of the ankle that is about 1cm posteroinferior to the posterior margin of the medial malleolus (FIG 1). The incision is then deepened through skin and subcutaneous tissue. Next, the flexor retinaculum is identified and then incised to reveal the tibial nerve, artery and vein (FIG 2). The tibial nerve is then released including the varicosities.
- Next, the medial and lateral plantar nerves are released as they course beneath the deep fascia of the abductor hallucis brevis muscle.
- Next, XCELLERATE was placed around the tibial nerve, artery and vein (FIG 3). No suture is required as the XCELLERATE will incorporate on the neurovascular bundle with a small amount of saline or blood. The flexor retinaculum is not repaired. The incision is then closed in layers (FIG 4).



**Figure 1**  
A curvilinear incision is made along the posteromedial border of the ankle that is about 1cm posteroinferior to the posterior margin of the medial malleolus.



**Figure 2**  
After release of the flexor retinaculum and exposure of the tibial nerve, artery and vein.



**Figure 3**  
XCELLERATE is wrapped around the tibial nerve, artery and vein.



**Figure 4**  
Closure of the tarsal tunnel incision without repair of the flexor retinaculum. ▶

## Outcome

- The patient is placed into a cam boot and is non weight bearing for 2 weeks.
- Sutures are removed at 2 weeks and the patient is allowed to weight bear in the cam boot for one month (FIG 5).
- The patient returned to all activities at 6 weeks (FIG 6).
- The patient has resumed all her activities without discomfort/parathesias and is very pleased with the final outcome.



**Figure 5**

Healed incision to the tarsal tunnel release at 2 weeks.



**Figure 6**

Healed incision to the tarsal tunnel release at 6 weeks.

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