

Minimal, Fast, Effective: Triple A approach to Plantar Fascia Release

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Introduction

The world of minimally invasive surgery has expanded the tools and approaches surgeons can offer patients. Whether for faster recovery, a more esthetically pleasing result, or for those that believe less is more, smaller incisions with jigs and gadgets have a wide appeal. A thorough search of the literature under surgical techniques for plantar fascia release yields historically two options:

- 1) The open approach with a plantar incision, and direct visualization of the plantar fascia. Which includes a recovery process of limited weight bearing, and instances of poor healing due to poor compliance
- 2) Endoscopic release which requires two incisions and a lengthy set up, which can be time consuming for surgical centers and hospitals alike.

Here we aim to define a different approach, one that has not been published or defined in literature; however, it has been carried out hundreds of times in the past 20 years at the Ali Albert Anaim Ankle and Foot practice. This approach requires commonly found equipment at most institutions, and a medial incision at the glabrous junction of the heel, away from weight bearing surface even on the most flatfooted individuals. Fast, cost effective, and pain relieving the Triple A technique for plantar fascia release is the intersection between the old school approach, and the minimally invasive new world.

Methods

Standard preparation and draping of the limb are carried out, with the patient under surgeon preferred anesthesia. A local block of 5-10cc of preferred anesthetic to the medial heel is suggested in preparation for the incision and procedure. Next, manual loading of the forefoot, along with palpation of the medial calcaneal tubercle and the plantar fascia is done (Figure 1). Once the fascia is identified, a superficial incision at the medial glabrous junction of approximately 1.5 cm is carried out to and through subcutaneous tissue. A straight hemostat is then used to deepen the incision through the fat pad. Once the plantar fascia is identified with the straight hemostat, release of the band anteriorly and posteriorly can be carried out with the straight hemostat (Figure 2). Once the band is isolated, the hemostat is opened slightly to be able to clamp the preferred width of the medial plantar fascia band (Figure 3. .



Figure 1.
Incision site



Figure 2 . Hemostat release



Figure 3. Clamping of medial band

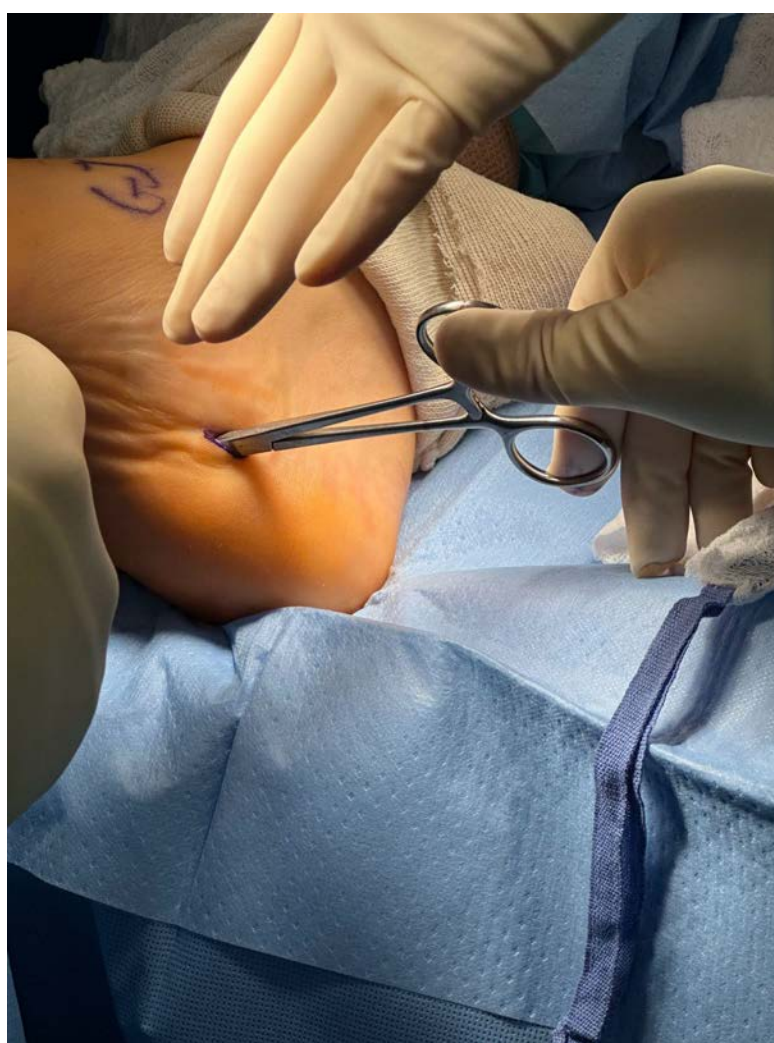


Figure 4.
Twisting check to confirm capture of medial band



Figure 5.
Tension Check

Post Surgical Pearls:

- A simple betadine dressing or dry sterile dressing with bolster is suggested.
- Weight bearing as tolerated in CAM boot post-operatively.
- Post operative pain can be managed with NSAIDs and RICE therapy
- Patient can begin to transition into regular shoe gear after stitches are removed

Discussion

The Triple A technique for plantar fascia came from the experience of Dr. Ali Anaim's training in podiatric surgery, orthopedics, and plastic techniques of lower extremity surgery. On record Dr. Anaim has performed this technique an estimated 30 times in the last year alone, while his practice partners who are trained and perform the same technique have done so at least 100 times in the past year, according to office records. The technique is a true testament to how simple modifications can lead to a precise, efficient, and straightforward way of relieving a patient's pain. Having used this technique long before the MIS era, this is an approach that focuses on faster recovery, smaller incision, and successful outcomes. Adaptable to most practices and levels of training, the Triple A technique for plantar fascia release is an innovative tool for foot and ankle specialists which provides a middle ground of surgical approaches for plantar fasciitis treatment.

A check is carried out by twisting the hemostat and noticing the resistance of the instrument (Figure 4). At this point, visible tension of the foot along the plantar fascia length can be observed as an extra check(Figure 5). Utilizing the hemostat as a guide, a sharp meniscal knife of appropriate size (Figure 6) can be introduced by running it along the hemostat and utilizing the hemostat handle to pierce through and cut through the tissue band. The cutting should be done anteriorly and posteriorly to the hemostat (Figure 7 and 8). This will allow for confirmation of the removal and release of the fascia tissue, which can be sent for pathological analysis if preferred. Next, flushing of the area with normal saline is recommended, and the skin can be re-approximated with the use of 3-0 Nylon.

Figure 6
meniscal knife



Figure 7 and 8. Anterior and posterior cutting with miniscal knife, following hemostat plane

