



Horizon™ Subtalar Implant

Technique:

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Design:

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The following is a step-by-step technique using the BioPro® Horizon™ Subtalar Implant.

Step One:

Attention is directed to the sinus tarsi. A linear incision centering over the sinus tarsi is made into Relaxed Skin Tension Line (RSTL), approximately 2cm in length. (Fig. 1) The intermediate dorsal cutaneous nerve is identified, carefully retracted and preserved. Next, a linear incision is made into the retinaculum to expose the sinus tarsi.

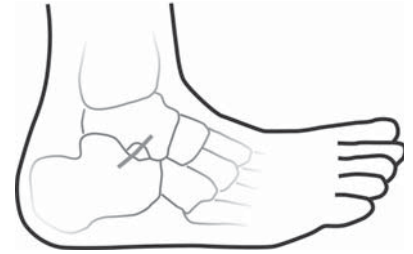


Fig. 1

Step Two:

A probe is used to slightly enlarge the sinus as well as the canalis tarsi and also to establish subtalar joint axis. (Fig. 2) The leading edge of the probe should be palpated at the medial aspect of the subtalar joint with slight tenting of the skin. This should be appreciated just inferior to the posterior tibial tendon and slightly inferior and anterior to the medial malleolus. Care is taken to preserve the interosseous talocalcaneal ligament. The probe is removed at this time.

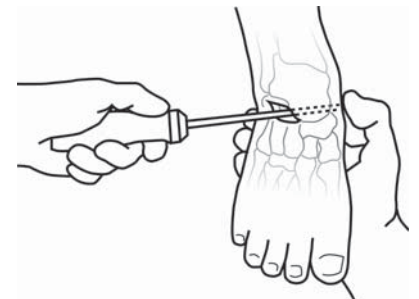


Fig. 2

Step Three:

Utilizing the K-wire holder, a guide wire is placed into the sinus and canalis tarsi repeating the same direction and technique as mentioned above. (Fig. 3) After that, appropriately and sequentially sized dilators are placed over the guide wire until desired restricted subtalar joint motion and clinical correction is achieved. (Fig. 4)

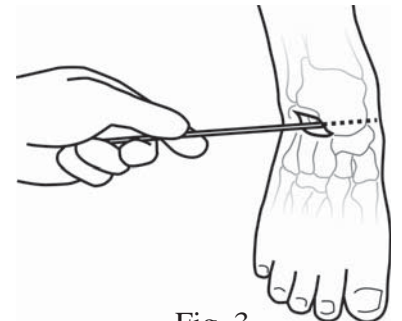


Fig. 3

This can be assessed intraoperatively by everting and inverting the calcaneus and at the same time loading the lateral column. Approximately 4° to 6° of eversion of the calcaneus should be noted. Now, the dilator is removed and the guide wire is maintained.

Step Four:

The appropriate color-coded sizer implant is placed over the guide wire and screwed into position. Again, subtalar joint motion is evaluated and clinical correction is appreciated. At this time the placement of the sizer can be appreciated (surgeon's discretion) with the C-arm on anterior to posterior ankle view.

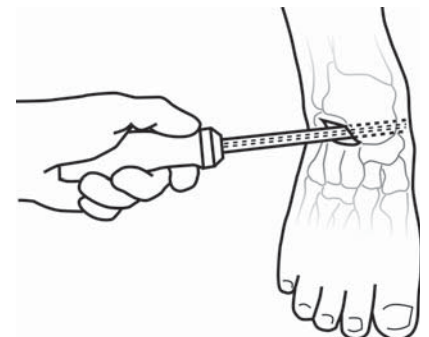


Fig. 4

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- **Simple insertion and forgiving learning curve prevent over-correction**

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Important: The positioning should be noted where the medial or leading edge of the implant should go slightly past the longitudinal bisec-tion of the talus (1-2mm). Also, markings on the graduated screwdriver should be noted. The sizer implant is removed.

Step Five:

The final step is insertion of the actual implant. (Fig. 5) The appropriately sized actual implant is chosen according to the sizer. At this time the graduated markings of the screwdriver should match and correlate to the sizer placement markings.

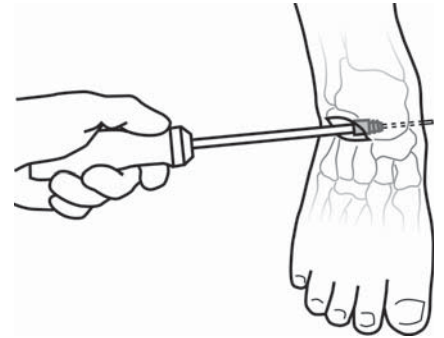


Fig. 5

Important: the sizer markings should not supersede the interoperative subtalar joint motion evaluation of the surgeon.

The area should be irrigated copiously with normal sterile saline. Again, range of motion should be assessed. Closure is then achieved using the surgeons preference.

Postoperative Protocol

When only an isolated arthroeresis procedure or combination arthroeresis and gastrocnemius recession has been performed, the postoperative care consists of a mildly compressive dressing with a below the knee removable AFO for three to four weeks. Gradually the patient is placed into a good walking or athletic type of shoe. Physical therapy may be necessary. By design the implant should reduce the incidence of sinus tarsi, however all patients should be advised of intermittent sinus tarsi for approximately two to three months. A short acting cortocosteroid injection may be indicated with persistent sinus tarsi. Also, patients should be educated on custom molded orthotics as an integral postoperative protocol.

If other adjunctive procedures are performed then the postoperative protocol is tailored to those procedures and combined with the above mentioned protocol. If an Achilles tendon lengthening is performed in conjunction with the subtalar implant, the patient is placed in a below the knee, non-weightbearing fiberglass cast for four weeks. The patient is then gradually advanced into a walking cast or a below the knee removable AFO for approximately two weeks. At this time physical therapy is advised consisting of muscle strengthening, stretching, and range of motion exercises. If medial column arthrodesis is performed in conjunction, the usual and customary postoperative period is required for bony consolidation in a non-weightbearing, below the knee cast. Rehabilitation and physical therapy is advised at this time.

Caution should be taken if a calcaneal navicular coalition resection is performed in conjunction with the implant. This can lead to the implant dislodging. It is suggested that these procedures not be performed concurrently.