
1st MPJ Deformity Correction

History of Diabetes and Hypertension



Reference Toe Implant™

Berdj H. Stepanian, DPM, FACFAS, C.Ped
New York, NY



A GLOBAL EXTREMITY COMPANY

6060 Poplar Ave., Suite 380, Memphis, TN 38119
844. 602. 6637 or visit i2b-USA.com

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INTRODUCTION: The patient was referred by a community orthopedist for evaluation and treatment of functional Hallux Varus and painful 2nd toe. The patient is a 68 year old white female with a history of diabetes and hypertension. She presented for cc of painful left big toe joint and hammertoe deformity of her second toe for more than five years. The patient has failed conservative treatment including shoe gear modification. The deformities became more symptomatic over time. The Patient's main complaint was that she could not wear shoes comfortably because by the end of the day her left big toe deviates medially and shoe rubs against it and causes pain. The patient's secondary complaint was that her medially deviated hammertoe was painful in shoe gear and ambulation. She stated that she was moderately active and wants to be able to walk without pain.

An examination of her foot revealed a deviated 1st MPJ medially consistent with functional Hallux Varus upon loading the joint. The



FIGURE 1

Intermetatarsal angle was less than 10 degrees and the Hallux Adductus was approximately 30 degrees. Dorsal medial eminence was insignificant (+tracking, -track bound, -crepitus). She also presented with a mildly subluxed 2nd MPJ medially with tender PIPJ. The deformity at the PIPJ and MPJ was reducible. (**Figure 1**). She was referred for medical clearance before surgical intervention. The patient was given multiple treatment options for the 1st MPJ surgery including fusion, osteotomy, Keller bunionectomy, hemi-implant and total toe implant for 1st MPJ repair. She chose the joint sparing silicone toe implant. She was offered amputation, arthroplasty, and osteotomy for her 2nd toe.

PROCEDURE: The Patient's surgery was done in a community hospital under local anesthesia with sedation. The chosen procedure was a total implant in the 1st MPJ using the Reference Toe System (RTS). In this case, a size 2 Implant was used. An x-ray performed post operatively revealed rectus alignment of the Hallux and IM within normal limits. (**Figure 2**). Post operatively the patient was placed in a post op shoe for 3-5 weeks then sneakers. Limited ambulation was recommended during the first week with gradual increases in activity after. After two months, the patient returned to regular shoes.

When using a total toe implant in any population, the most important decision is proper patient selection for the proposed procedure. Also it is important to make sure that the implant is properly implanted. The RTS System is cannulated and all instrument reaming is performed over a single

FIGURE 2



guide wire. This single reference point helps assure reproducible implantation results. Range of motion is assessed with the grommets and trial sizer in place while loading the foot. If a deviation exists or the joint space seems too tight, these must be addressed by doing the appropriate soft tissue dissection and bone resection. If the joint has adequate range of motion and is rectus, the permanent implant is secured into place and the capsule is re-approximated. The incision is closed in layers in the normal manner.

Conclusion: There are many different procedures and implants available to treat 1st MPJ deformities. The RTS implant is an excellent choice in the right patient for correction of these deformities. It is simple to use and allows for excellent pain free motion.