Correction of Flexible Hammer Toe Deformities
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(a – Tornier, INBONE, Merete
b – Link Orthopaedics, Tornier, INBONE, Merete
c – Merete
d – INBONE
e – Link Orthopaedics, INBONE, Integra, Merete, Zimmer)

The flexible hammertoe deformity is defined as a toe which can be manually corrected to the neutral position. It usually precedes the fixed toe deformity. Thus, the treatment for a flexible hammertoe deformity is typically the same as those for a fixed hammertoe minus the PIP arthroplasty. Hence, tendon transfers to redirect the forces into corrective rather than deforming forces are appropriate. Ergo, extensor digitorum brevis and flexor digitorum longus tendon transfers are very appropriate for correction of this deformity. Additionally, releases to correct the static deformity are often performed. These include extensor tendon “Z” lengthenings and collateral ligament releases. Imbrication or tightening of the lateral ligament/capsule with a varus toe and imbrication or tightening of the medial side in a valgus toe is beneficial. There are also times when it is simply effective to release the flexor digitorum longus in order to remove the deforming force, especially when the MP joint is in neutral position. In more unique cases, a basilar proximal phalangeal osteotomy can also correct the deformity, but is less effective in directing the surgery toward the actually cause of a flexible hammertoe deformity. This cause is probably a continuum or multifactorial and includes attenuation of the plantar plate, muscle imbalance in the toe and contracture of the deforming forces. Once the deformities are corrected, holding the toe in corrected position is appropriate with the use of a K-wire. Breakage of .045 K-wires in patients who are noncompliant can occur. Thus, a .054 K-wire is most appropriate. Since the opportunity for antegrade placement is limited without access to the PIP joint and difficult from the tip of the toe, I frequently insert the .054 K-wire from the central base of the proximal phalanx out the tip of the toe and then drill the pin retrograde into the metatarsal head. On the other hand, the .062 inch K-wire is used when an osteotomy is performed of the metatarsal neck. The pin is used in a shish kabob manner by again inserting it into the center of the articular surface of the proximal phalanx out the tip of the toe and then back into the metatarsal head. Then the pin is drilled across the osteotomy site into the metatarsal shaft. Of course, a screw can also be used to hold the metatarsal neck osteotomy as well. The metatarsal neck osteotomy, although more frequently associated with a fixed hammertoe deformity, may be accomplished when reduction of the MP joint is difficult. Shortening of the metatarsal may also be considered. Finally, an option (for the elderly who do not want to bother with reconstruction) is an amputation of the 2nd toe. This is most efficacious when the great toe is already touching the third toe. Other methods of correction including syndactylization, and proximal phalanx resection, partial or complete, are mentioned to be avoided.