Treatment of Fixed Lesser Toe Deformities
Michael J. Coughlin, MD
(a – Smith & Nephew
b – Link Orthopaedics
c – Nexa Orthopaedics, NewDeal Orthopaedics
d – Nexa Orthopaedics
e – Nexa Orthopaedics)

Fixed lesser toe deformities may develop for idiopathic reasons or due to elongated lesser toes or long-term constriction from ill-fitting foot wear. The first question is, is this a fixed or flexible deformity? A mallet toe deformity occurs at the DIP joint of the lesser toes. They can be multiple or single deformities, and they can develop as an angular or flexion deformity. On occasion a callosity develops at the tip of the digit or over the DIP joint. Surgical treatment involves a condylectomy of the middle phalanx, flexor tenotomy and K-wire fixation. In long-term follow-up, alignment has been the major issue in patient satisfaction. A fibrous union is not associated with dissatisfaction.

Claw toe deformities develop due to neuromuscular, metabolic, inflammatory or traumatic causes. Claw toes occur with multiple joint deformities (MTP, PIP and DIP joints) and occur often in several toes. Treatment involves resection arthroplasty of the lesser toe PIP joints and soft tissue release at the MTP joints. Hammertoes may develop either with a DIP joint deformity or with a concomitant MTP joint deformity. Bony resection of the distal condyles of the proximal phalanx are the common treatment, along with K-wire fixation. At long-term follow-up the major issues for dissatisfaction are again malalignment of the MTP or DIP joint. Pressure areas may develop leading to soft corns or calluses. Long-term issues include swelling (which often resolves), molding or soft tissue deformity of the lesser toes and recurrence (which may be due to a tight flexor tendon). Interoperative complications include broken K-wires and infection.

Other topic of discussion includes the use of partial proximal phalangectomies which I believe are contraindicated and are very difficult to salvage. Occasionally an interposition bone graft may salvage a floppy toe. Postoperative vascular problems may develop in any difficult reconstruction.

Also discussed will be reefing of the lesser MTP joint capsule for angular deformities, plantar capsular repair, and diaphyseotomy for treatment of a long second toe. In the case of severe deformities, amputation may be paired with an MTP arthrodesis. Also to be considered as new forms of treatment include concomitant first and second MTP arthrodesis or soft tissue interposition arthroplasty of the 2nd metatarsophalangeal joint.