



I f-ing hate toes



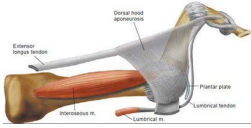
Hammertoe

- ◆ PIP flexion
- ◆ DIP extension
- ◆ MTP extended
- ◆ Rigid or flexible



Biomechanic

- ◆ Overpull EDL
- ◆ Imbalance of intrinsics



Incidence

- ◆ Incidence 2-20%
- ◆ Female:male =4:1
- ◆ Increase 50-70 yo

Causes

- ◆ Multifactorial
- ◆ Footwear
- ◆ Trauma (compartment syn.)
- ◆ RA/Psoriatic arthropathy
- ◆ Neurological pathology



Treatment

- ◆ Flexible
- ◆ Rigid
- ◆ MTP hyperextension
- ◆ FDL tight
- ◆ Assoc. Hallux Valgus

Nonoperative

- ◆ Pain or corns on dorsal PIP footwear, gel sleeves, pads



Nonoperative

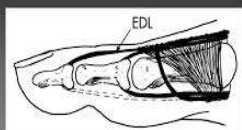
- ◆ Flexible deformity- Budin strap



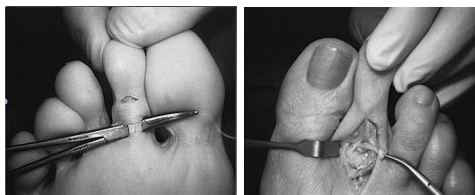
Gridlestone Taylor

- ◆ Taylor, R.G. "An Operative Procedure for the Treatment of Hammer-Toe and Claw-Toe." JBJS 1940: 12(3): 608-609

Flexor to Extensor Tendon Transfer



Flexor to Extensor

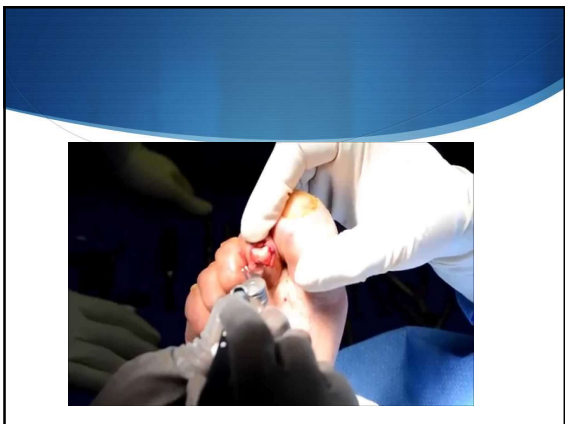


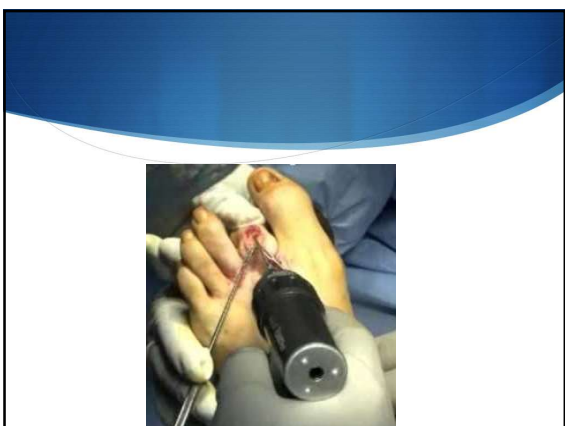
Flexion-Extension transfer

- ◆ Boyer ML, DeOrio JK. Transfer of the flexor digitorum longus for the correction of lesser toe deformities." FAI 2007: April28 (4): 422-30.
- ◆ 89% of the toes (70 toes; 34pts) were satisfied and would have it again

PIP resection arthroplasty

- ◆ Z lengthening extensor tendon
- ◆ Release MTP capsulotomy
- ◆ Resection head of proximal phalanx
- ◆ 0.62 k wire







Post op protocol

- ◆ WBAT in post op shoe
- ◆ K wire pulled at 4 weeks
- ◆ +/- on taping
- ◆ Shoe @ 4 weeks

Implants




Complication

- ◆ Swelling
- ◆ PIP stiffness
- ◆ Pin tract infection
- ◆ Loss of blood flow
- ◆ Residual angulation

Amputation

- ◆ Elderly patients
- ◆ Medical co-morbidities
- ◆ Smokers
- ◆ Early WB

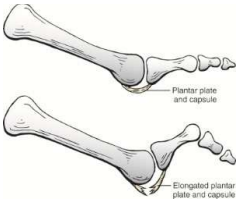


Amputation

- ◆ Gallentine JW, DeOrio JK: Removal of the second toe for severe hammertoe deformity in elderly patients. FAI 2005; 26: 353-358
- ◆ 12 patient (17 amputations)
- ◆ No major complications
- ◆ 8 valgus drift great toe
- ◆ 9/12 functional improvement

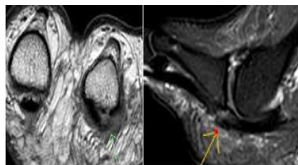
Plantar plate

- ◆ Principle stabilizer of MTP joint
- ◆ Injury results in metatarsalgia, hammertoe deformity, subluxation of MTP joint

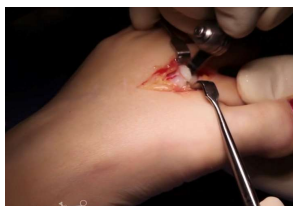


Plantar plate tear

- ◆ Chronic inflammation
- ◆ Traumatic rupture



Weil Osteotomy



Plantar plate repair

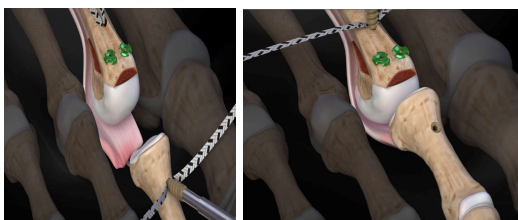


Post op

- ◆ Post operative Heel WB for 6 weeks
- ◆ 6 weeks WBAT in sneaker
- ◆ Return to activities 12 weeks

- ◆ Nery C, Coughlin MJ, Baumfeld D, Mann TS. Lesser metatarsophalangeal joint instability: prospective evaluation and repair of plantar plate and capsular insufficiency. FAI 2012; 33 (4): 301-311
- ◆ Prospective study average f/u 1.5 yrs excellent pain relief with improved alignment and strength

Internal brace



Post op protocol

- ◆ 0-2: Post-op shoe Heel WB, Early motion
- ◆ 2-4: Advance WBAT; Regular shoe 4 weeks
- ◆ 4-6: Regular shoe wear , AROM, PROM, low resistance activities
- ◆ 6: Advance activities as tolerated

Thank You

