Bunions Gone Bad

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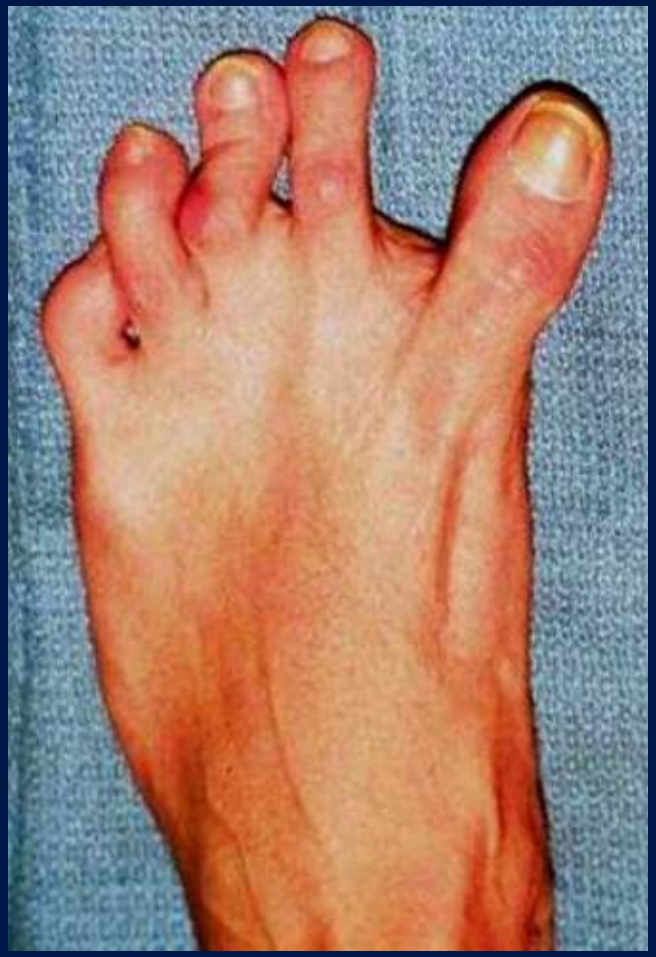

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Glad to be Home!

Bunions Gone Bad

Common Complications
Prevention and Salvage Format

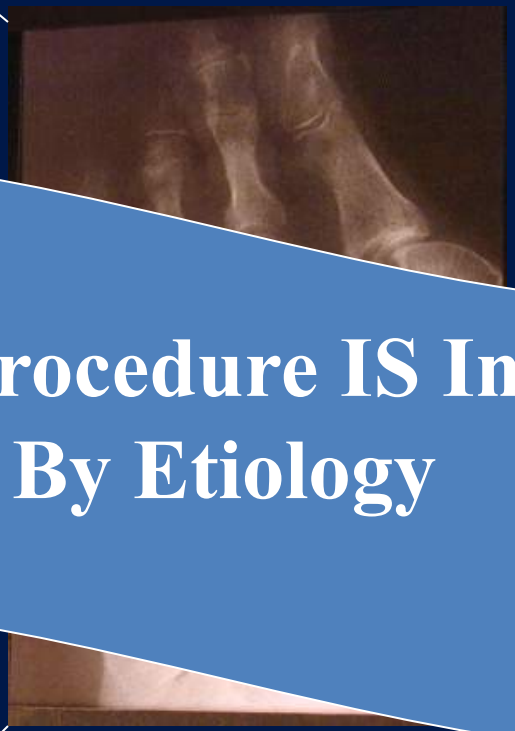
- Etiology
- Patient selection
- Pathophysiology
- Bunion Basics

Bunions Gone Bad

Common Complications
Prevention and Salvage Format

- Distal Osteotomies/Soft Tissue Release
- Proximal Osteotomies/Lapidus
- Odds and Ends (Aiken, Keller, Hallux Varus)
- Cases

Multifactorial
Etiology



Surgical Procedure IS Influenced By Etiology

Neuromuscular
Imbalance

Trauma

Other Factors Influencing Bunion Treatment Options

- Age
- Activity level
- Shoe choices
- Severity of deformity
- Area of Deformity
- + Arthritis
- Prior operations
- Systemic Disease
- Patient Expectations
- Patient complaints
- Ability to comply with post op restrictions

Pathophysiology

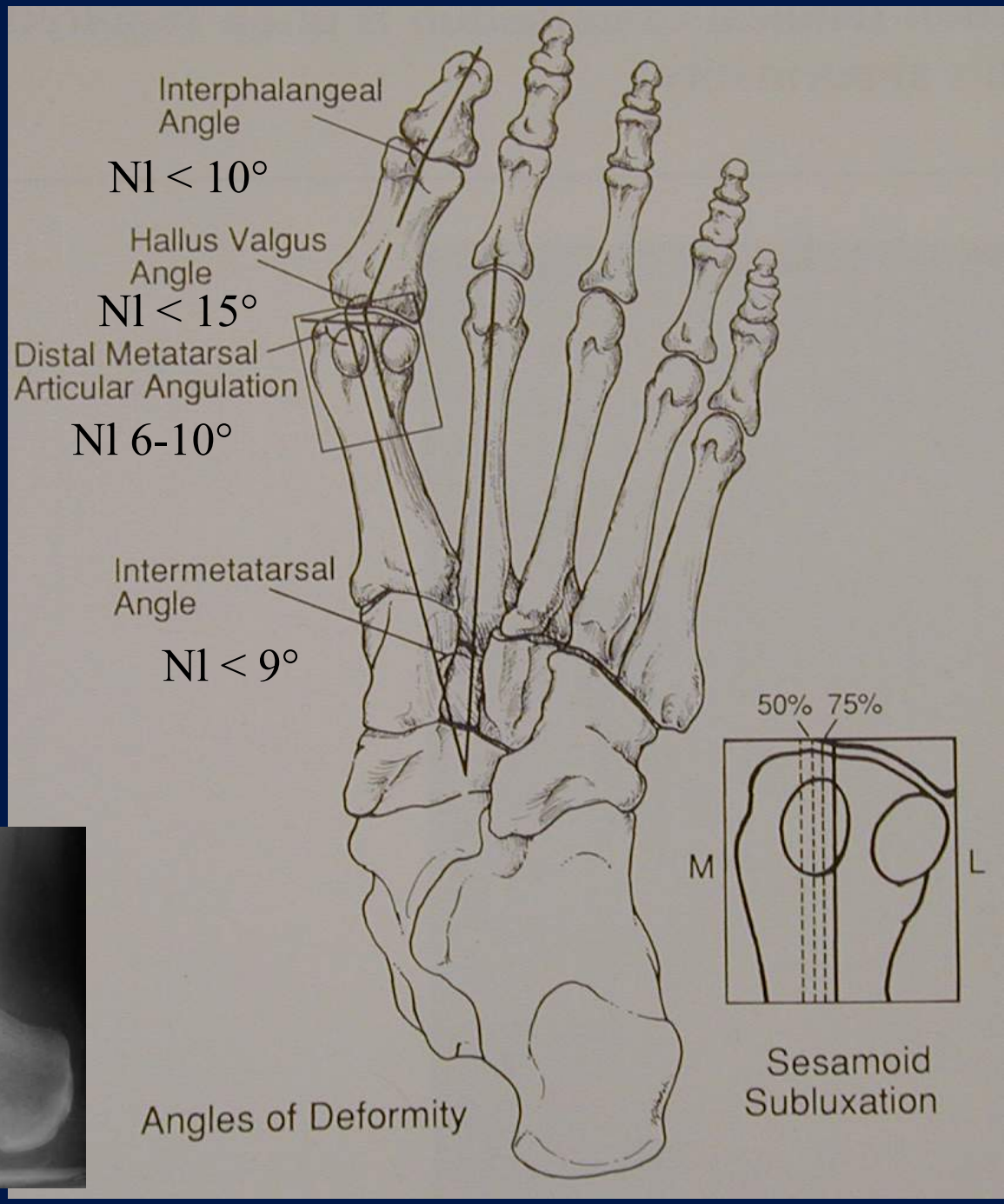
- Medial capsular attenuation
- Proximal phalanx drifts laterally
- Lateral “off axis” contraction of the EHL and FHL

Pathophysiology

- Sesamoids remain in place
- Wedge force of Proximal Phalanx
- MT head moves medially (↑ IM ∠)
- Contracture of soft tissues intrinsics and ligaments
  - –Lateral capsule, Add. Hallucis, lateral metatarsal-sesamoidal ligament, Intermetatarsal ligament

Bunion Basics

Contributions to Valgus
- IM Angle
- Hallux Angle
- DMA Angle
- Interphalangeal Angle
- Medial Ray Instability



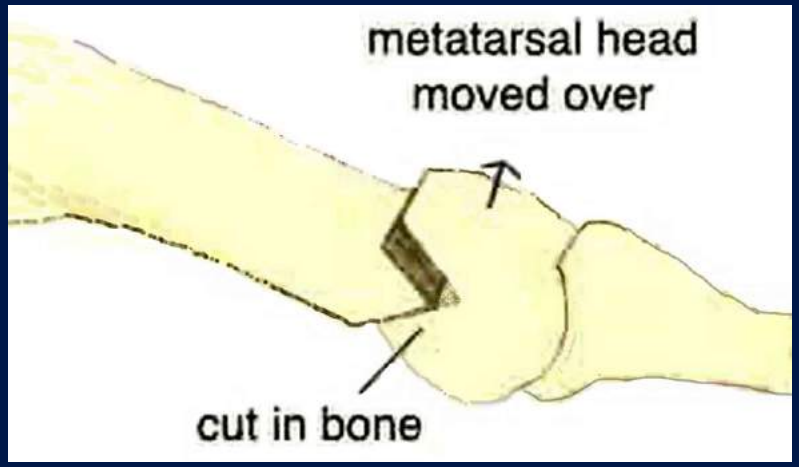
Bunion Complications

- Recurrent Bunion
- Hallux varus
- Malunion
  - Shortening
  - Dorsal Displacement
- Transfer metatarsalgia
- Neuropraxia
- Prominent hardware
- Stiffness

Procedure Specific Complications

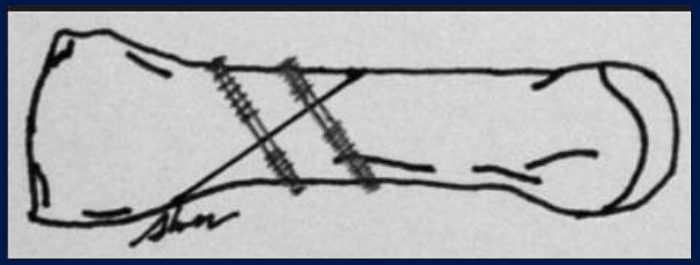
Chevron Osteotomy

Non-union
Malunion
AVN
Recurrent Bunion
Transfer
Metatarsalgia



Procedure Specific Complications

Proximal Osteotomy
Or Lapidus



Non-union
Malunion
Recurrent Bunion
Hallux Varus
Stiffness/arthritis
Transfer Met.

Procedure Specific Complications

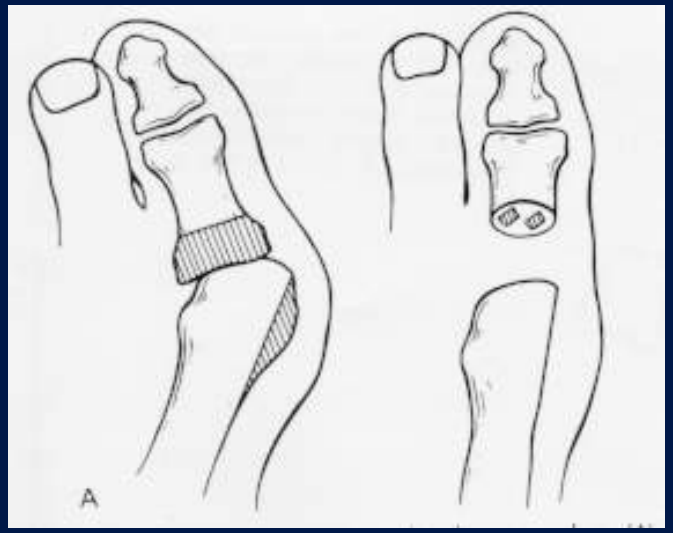
Phalangeal (Aiken) osteotomy

Undercorrection
1st MTP arthritis

Procedure Specific Complications

Phalangeal Base Resection (Keller)

Floppy Toe
Cock up toe
Transfer Metatarsalgia
Loss of toe off strength



Case 1

- 55 yo Woman
  - Pain in the forefoot
  - Prior Chevron Bunionectomy
  - Shoe wear irritation PIP joint

PE

- Tenderness and swelling over 2,3 MTP joints
- Hyperextended MTP joints, but PIP joints flexible
- 1st MTP joint asymptomatic with slightly decreased ROM compared to Right side

Non-Op Options

ACCOMODATION TO DEFORMITY and Off Loading

- Metatarsal Pad
- Extra Depth Shoes

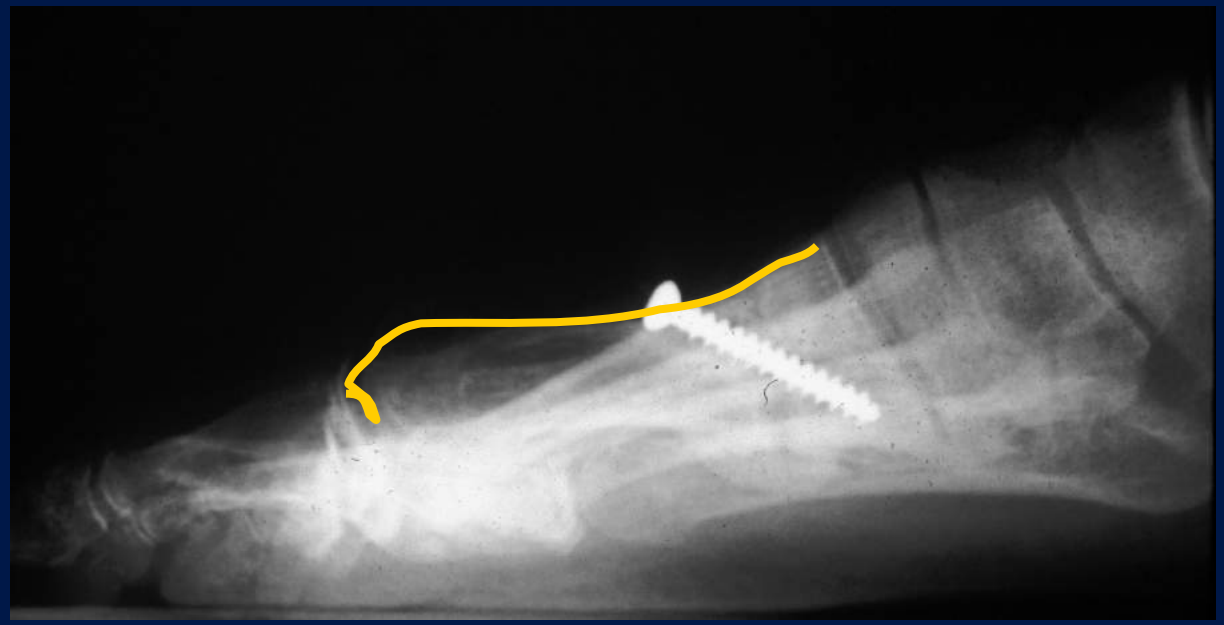
Operative Treatment

Case 2

- 50 year old secretary who had prior surgery
  - Has 2,3 MTH pain
  - Painful Recurrent bunion

Issues:

- Dorsal Malunion
- Incomplete IM Angle correction



Non Operative Treatment

- Shoes with a wide toe box
- Orthotics with metatarsal pad

Operative Treatment

- Repeat Proximal Osteotomy
  - Correct IM Angle
  - Plantarflex First Ray
- Add an Aiken if needed

Case 3

- 48 year old Female
- One prior bunion surgery
  - Silver Bunionectomy
- Recurrent deformity
- Persistent Transfer Metatarsalgia

Non Operative Treatment

- Accommodative Shoes – wide toe box
- Orthotics with a metatarsal pad

Operative Treatment

- First Metatarsal Fusion

Case 5

- 61 year old Woman
- Prior Bunion surgery
- Now painful great toe and can’t find shoes
- PE: normal 1st MTP motion
- Deformity is stiff and doesn’t completely passively reduce

Non Operative Options

- Toe taping
- Accommodative Shoes

Operative Treatment

- Soft Tissue release (ABD Hallucis) and Capsule;
- EHL re-routing under transverse IM ligament

- If PE demonstrated 1st MTP stiffness, answer is first MTP fusion

Case 5

- 60 yo woman who has had 2 prior bunion surgeries due to a persistantly painful foot
- 1st Chevron Bunionectomy
- 2nd 2,3 shortening osteotomies for transfer metatarsalgia
- Now has 1,2,3 MT pain, and 4th plantar MTH pain

- 1st MT Non-union,malunion
- 2,3 MT Non-union
- 4th MT overload (transfer Met.)

Sometimes it’s the patient…

Consider Bone Density Study and osteoporosis Tx

“Did you ever wonder why?…”

- Know the etiology of bunions
- Know the pathophysiology of bunions
- Know factors influencing bunion treatment
- Know how to examine, measure and quantify bunions
- Know “The Algorithm” for surgical tx
- Know the complications…