# 1 Heel pain

- Derek Park
- Barnet & Chase Farm Hospital

# 2 Insertional TA tendinopathy

- Can be associated with a prominent posterosuperior calcaneal tuberosity (Haglund's deformity)
- Retrocalcaneal bursitis

### 3 Insertional TA tendinopathy

- Focal tenderness at the site of TA insertion
- Lateral XRs may reveal calcification
- Non-operative: same as mid substance tendinosis = shoes with soft heel or open back; ESWT
- Surgery: debridement in mild cases; severe cases tendon can be removed and reattached

#### 4

### 5 Plantar heel pain

- Background
- Differential diagnosis
- Treatment options
- Evidence
- Current management concepts

### 6 Plantar heel pain

- Common condition
- Affects 1:10 adults
- Often self-limiting
- Recalcitrant cases can be challenging

### 7 Anatomy

# 8 Anatomy

- Type I collagen
- Supports medial longitudinal arch & aids propulsion, dissipates forces + stresses during gait and loading

- Visco-elastic property
- Ruffini & Pacinian corpuscles = mechanoreceptors
- Hyaluronan (HA) = proximally

### 9 Anatomy

- Type I collagen
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#### 10 Biomechanics

- 11 Biomechanics
- 12 Where is the pain
- 13 Differential diagnosis
  - Nerve
    - sciatica; tarsal tunnel, FBLPN (N to ADQ)
  - Soft tissue
    - fibromatosis, bursitis, bruise, fat-pad atrophy
  - Bone
    - stress fracture, infection, tumour, Paget's

### 14 History

- Plantar heel pain
- No trauma
- Pain on 1st steps
- Warms up
- Returns with prolonged WB

#### 15 Examination

### 16 Enthesopathy

- Associated with inflammatory arthropathy
- Heel spurs often found
- Medical management of inflammation
- 17 Investigation
- 18 PF & TA stretching
- 19 Night splint
- 20 Medial arch foot orthoses
- 21 Treatment
  - Steroid injection
    - risk fat atrophy
    - risk of rupture
  - Ultrasound guided
  - Judicious use
  - ESWT

#### 22 Treatment

- AOFAS position statement:
  - Don't perform surgery for PF before trying 6 months of nonoperative Rx (97% will resolve with 6 months of consistent, nonoperative Rx)
- Surgery is reserved as a last resort:
  - Open or endoscopic plantar fascia release + release FBLPN +/- tarsal tunnel release

#### 23 Evidence

- Marginal gains only
- steroid injection short term & small degree
- orthoses prolonged standing
- limited evidence that stretching & heel pads are better than custom-made orthoses

• ESWT +ve but small effect

#### 24 Treatment

- GP Physio stretches US insoles NSAIDS taping GP MSK Triage Acupuncture Orthopaedic F&A surgeon
- Ortho F&A clinic more physio gastroc/PF stretches imaging review desperate measures pain clinic CBT ....

#### 25 Assessment

- Ideal one-stop service: diagnosis, imaging, treatment
- Determine gastrocnemius tightness: Silfverskiöld test

#### 26 Gastrocnemius contracture

- Restricted ankle dorsiflexion associated with
  - chronic TA tendinopathy
  - plantar heel pain
  - acquired flat foot deformity
  - midfoot OA
  - metatarsalgia

#### 27 Treatment

- 28 Gastroc lengthening
- 29 Gastroc lengthening
- 30 Background
  - The French influence LS Barouk, P Barouk, E Toullec, JA Colombier

# 31 The role of gastrocnemius contracture

- Association between isolated gastrocnemius contracture and forefoot/hindfoot problems DiGiovanni JBJS 2002, Patel & DiGiovanni FAI 2011
- Spectrum midfoot/arch collapse J Anderson, D Bohay et al

# 32 Anatomy

### 33 Anatomy

### 34 PMGR

- Heel pain clinic
- Gastrocnemius contracture and its role in plantar fasciitis and Achilles tendinopathy
- Specific indications
- Stress ongoing management with eccentric stretching +/- ESWT

### 35 Results - PMGR in recalcitrant plantar fasciitis

- Prospective consecutive series of 21 heels (17 patients) with recalcitrant plantar fasciitis
- Symptom duration 12 months to 6 years
- Positive Silfverskiöld's test
- Confirmed with imaging (MRI, USS or bone scan)
- Average 24 months follow up (8-36 months)
- Outcome measure: 5 pt Likert scale, calf weakness, satisfaction

#### 36 Results

# 37 Results - PMGR in Achilles Tendinopathy

- 10 PMGRs (9 patients) over 2 years
- Duration symptoms 6-15 months
- Min follow up 18 months (20-40 months)
- Outcome measures: VAS, VISA-A, AOFAS ankle-hindfoot score & overall satisfaction score

#### 38 Results

### 39 Personal approach

- Clinical assessment include XRs, USS to define pathology and PF thickness, r/o other pathology
- 6 months physio (lower limb team)
- If gastroc tight stretch PMGR
- If not ESWT
- Consider steroid, PRP, ABT, HA, dry needling, acupuncture, topaz

• Defer surgery indefinitely

# 40 Summary

- Aim for logical approach, step-wise management, and one-stop model
- Think of tight calves
- Consider non-operative measures always
- Evidence

# 41 References