Foot and Ankle Pearls

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BASK ACPA meeting 21/3/18
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Foot and Ankle PERILS

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Can you just...?
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You don’t mind, do you?
What can be achieved

What the patient expects

Hips  Knees  Feet  Spine
Where the magic happens

Feet  Ankles

Your comfort zone

THR  TKR

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What’s your coping strategy?
A miscellany of polyonymous foot & ankle problems

- Tibialis posterior dysfunction
- Charcot foot
- Complex regional pain syndrome
TIBIALIS POSTERIOR DYSFUNCTION

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Tibialis posterior dysfunction

Also known as...
- Posterior tibial tendon dysfunction (PTTD)
- Acquired adult flat foot (AAFF)
- Planovalgus foot

Pathology = tendinopathy
Symptoms and Signs

- Posteromedial ankle pain / swelling
- Progressive flattening of medial arch of foot
- Sometimes lateral impingement pain
- ‘Too many toes’ sign
- Tiptoe test
This is not a ‘Too many toes sign’
Normal

Abnormal

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Investigations

• Clinical diagnosis – tests not routinely required

• Is there arthritis?
  – X ray
  – CT / MRI

• What is the condition of the tendon and the tendon sheath?
  – Ultrasound
  – MRI
Spectrum of clinical problems

1. Painful tenosynovitis with mild loss of arch height
2. Flexible flat foot
3. Rigid (arthritic) flat foot
4. Flat foot with valgus ankle osteoarthritis
   *(Johnson & Strom classification)*
5. Flat foot with proximal coronal plane deformity
   *(I invented that one!)*
Treatment

• “Initial treatment is non-surgical for all stages of the disease”
• Manage inflammation
  – Activity modification, NSAIDs, Compression, (steroid injection), (surgery)
• Offload tendon
  – Activity modification, orthotics, (surgery)
• Manage flexible deformity
  – Corrective orthotic, (surgery)
• Manage fixed deformity
  – Accommodative orthotic, (surgery)
• Don’t make the treatment worse than the condition!
ACPA algorithm

• No symptoms
  – No treatment
• Pain but no deformity or flexible deformity
  – Refer to a podiatrist or orthotist
  – If they come with a collection of insoles that haven’t worked – refer to a foot & ankle surgeon
• Pain and severe and/or rigid deformity
  – Not a surgical candidate – refer to orthotics for splintage
  – Potential surgical candidate – refer to a foot & ankle surgeon
CHARCOT FOOT
Charcot Foot

Also known as:

• Neuroarthropathy
• Neuropathic arthritis

Pathology = joint inflammation leading to rapid bone destruction and deformity in a patient with neuropathy (most commonly diabetic)

Jean-Martin Charcot 1825-1893
Symptoms and signs

- History of minor injury
- May have pain
- Rapid development of signs of inflammation
- Redness that decreases with elevation
- Temperature differential
- Foot deformity
- Bony prominences, ulceration, infection
Monofilament test
Investigations
Classifications

Pathological (Eichenholz):
1. Acute inflammation – fragmentation
2. Early healing – coalescence
3. Later - consolidation

Anatomical (Brodsky)
1. Midfoot
2. Hindfoot
3. Other
   a) Ankle
   b) Calcaneal tuberosity
Treatment

- Rapid immobilisation of the foot may reduce risk of progressive deformity, ulceration and infection
  - *Diabetic walker boot*
  - *Total contact cast*
- Infection requires long course of antibiotics and occasionally urgent surgery
- Acute Charcot foot takes 18-24 months to heal
- Surgical reconstruction possible in selected cases
ACPA algorithm

• An acutely inflamed foot in a diabetic with neuropathy is Charcot until proven otherwise
  – Get an X ray and refer to orthopaedic on-call same day

• An acutely inflamed foot in a diabetic with a foot ulcer is infected Charcot until proven otherwise
  – Get an X ray and refer to orthopaedic on-call same day

• A chronically deformed foot in a diabetic with neuropathy has a risk of ulceration
  – Refer electively to a foot and ankle surgeon
COMPLEX REGIONAL PAIN SYNDROME (CRPS)
Complex Regional Pain Syndrome

Also known as:

- Reflex sympathetic dystrophy
- Sudeck’s atrophy
- Algodystrophy
- Causalgia

Pathology = Presumed over-activation of pain-processing neural pathways. Possible auto-immune / inflammatory basis in some.
Symptoms and Signs - Budapest criteria (1994)

1. Disproportionately severe pain
2. Symptoms in at least 3 categories and signs in at least 2 categories, of abnormal
   a) Sensory function (allodynia, hyperalgesia)
   b) Vasomotor function (colour, temperature)
   c) Sweating / Swelling
   d) Motor function (weakness, tremor, dystonia)
      Trophic changes (skin, hair, nail)
3. No other diagnosis that explains the findings better
Investigations

• Clinical diagnosis – no investigations required if diagnosis is clear

• Sometimes need investigations to exclude alternative diagnoses and persuade the patient of the diagnosis
  – Vascular problems (Doppler, duplex)
  – Mechanical foot pain (X rays, MRI)
  – Spinal (MRI)
  – Peripheral nerve entrapment (Nerve conduction studies)
Treatment

Ask me my three main priorities for treatment of CRPS, and I tell you: education, education, and education.

— Tony Blair —
Treatment

• Education
  – Nobody’s fault
  – Whole pain processing pathway
  – Pain that is no longer useful
  – Timescale

• Manage pain
  – ‘Normal’ and neuromodulatory painkillers
  – Nerve blocks, nerve stimulator

• Limb function
  – Physiotherapy / Occupational Therapy

• Psychological aspects
ACPA algorithm

• If you suspect your patient has CRPS
  – Advice about possible diagnosis
  – Internet information – www.rsdso.org
  – Urgent referral for physiotherapy
  – Urgent referral to pain management clinic
  – Consider requesting GP to prescribe neuromodulatory painkillers – Amitriptyline, Gabapentin, Duloxetine
Summary

• Polyonymous
• Most flat feet can be managed non-surgically
• Charcot arthropathy can be rapidly destructive unless diagnosed promptly
• CRPS is poorly understood, challenging to treat, and requires multi-disciplinary input
“I lost it in a medicolegal minefield”