

BASK ACPA meeting 21/3/18



Foot and Ankle Pearls

Steve Milner

Consultant Trauma, Orthopaedic and Foot & Ankle Surgeon
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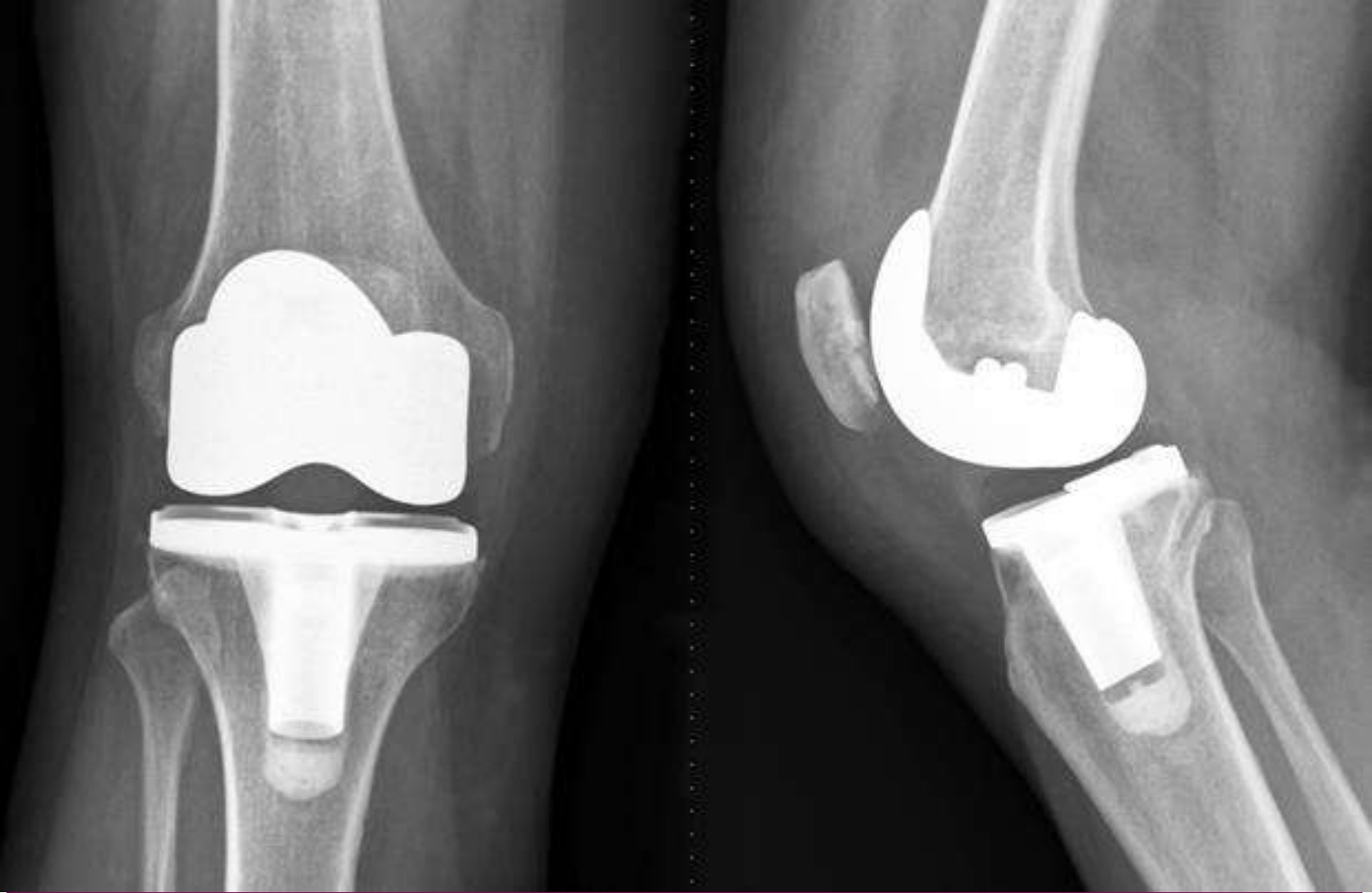
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Foot and Ankle PERILS

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Can
you
just...?



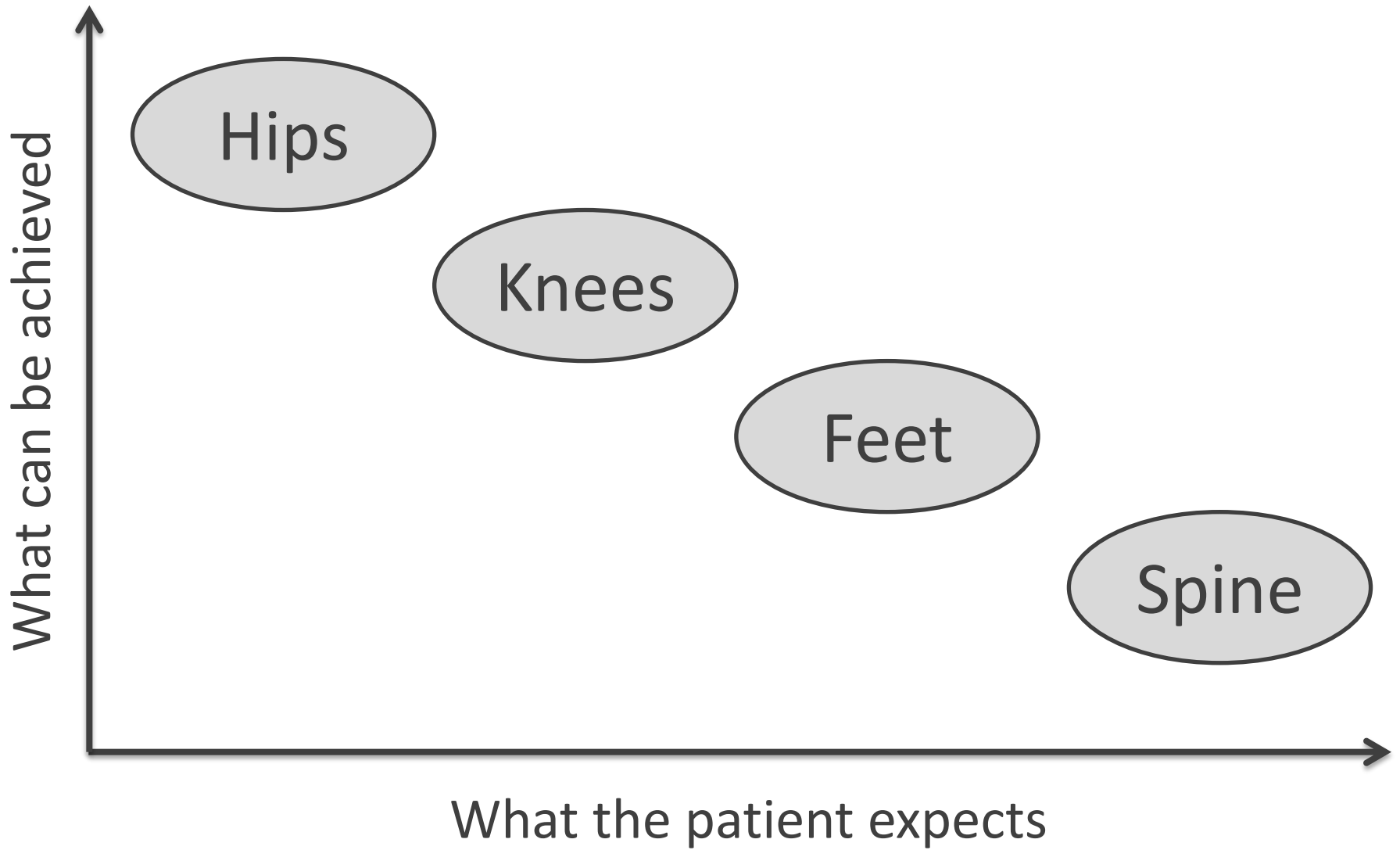


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You don't mind,
do you?



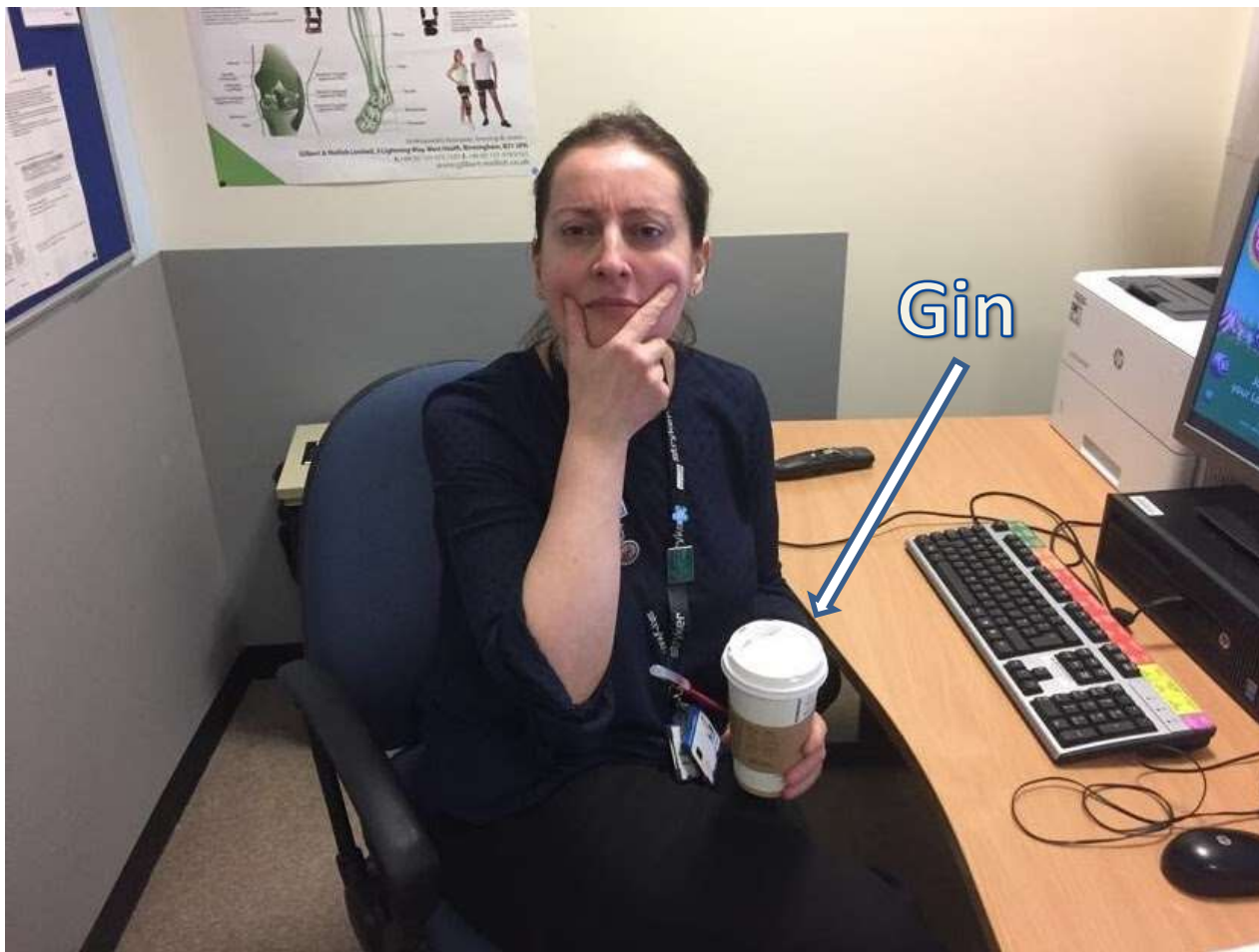
Your
Comfort
Zone



Where the
magic happens

Feet Ankles

What's your coping strategy?

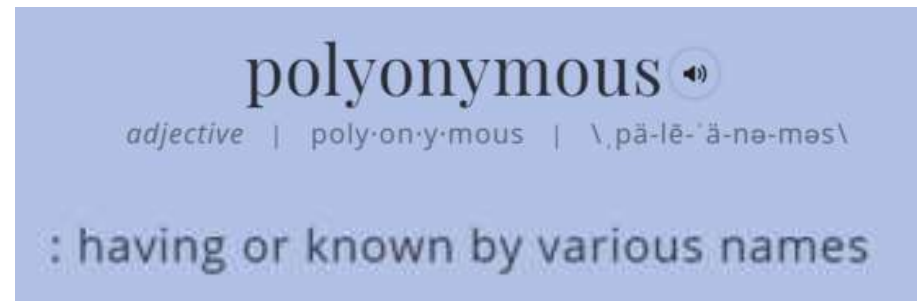


Foot & Ankle Pearls

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A miscellany of polyonymous foot & ankle problems

- Tibialis posterior dysfunction
- Charcot foot
- Complex regional pain syndrome





TIBIALIS POSTERIOR DYSFUNCTION

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'



Reuters



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Normal

Abnormal

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!)



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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



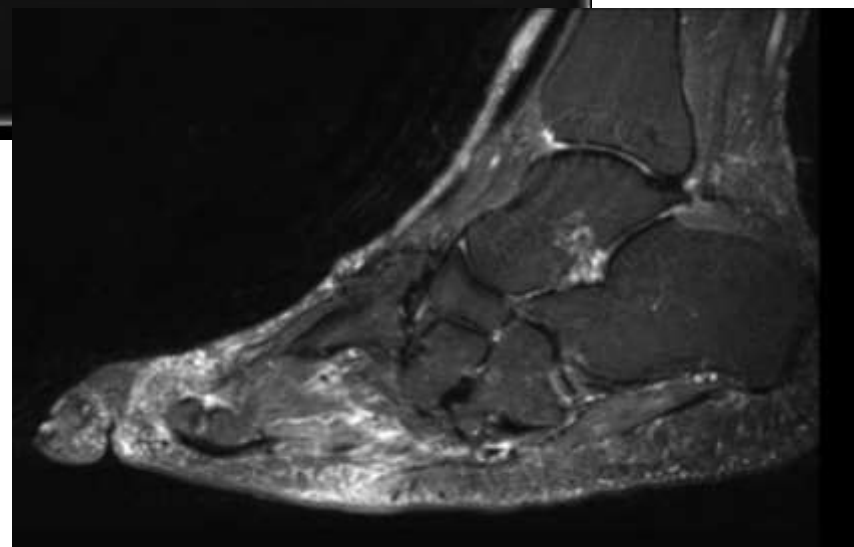
Monofilament test



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Investigations



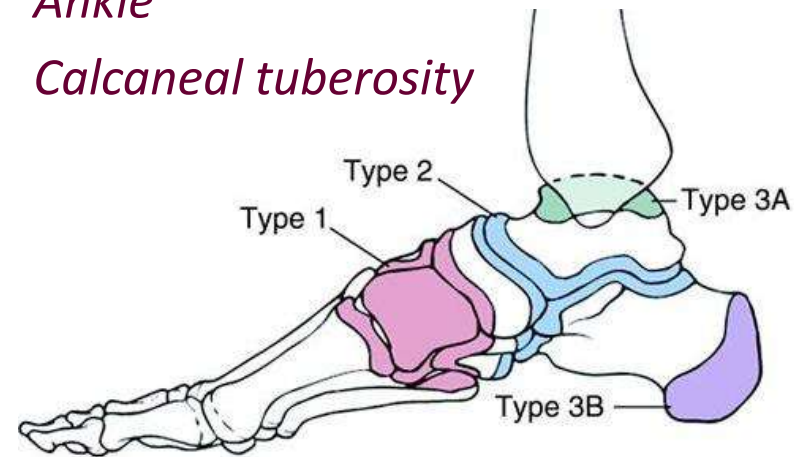
Classifications

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.



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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 —

AZ QUOTES

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.rsds.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”