

ACUTE CHARCOT PATHWAY OF CLINICAL CARE

Clinical signs/symptoms:

- Localised unilateral swelling
- Erythema
- Warmth
- +/- Pain (50%)
- +/- Deformity (IV)

Urgent referral to multidisciplinary high-risk foot service (EO)

Clinical assessments: Using Charcot assessment and management form

- Hx of trauma (25% of cases) (III-2) or recent surgery (IV)
- Long standing diabetes (85% >10 years duration) (II)
- Peripheral neuropathy (unable to detect 10g monofilament) (III)
- Bounding pulses evident by palpation or with doppler ultrasound (where obscured by concurrent oedema) (III)
- Infrared dermal thermometry comparisons: >2.0°C between contra-lateral corresponding locations using infrared dermal thermometer accurate to ±0.1°C, i.e. DermaTemp (IV)

Clinical management:

Immediate immobilisation (IV)

1. Total contact cast (TCC) (IV) *or*
2. Irremovable walker (i-TCC) with offloading insole (IV) *or*
3. Removable walker with offloading insole (IV) (*only* if TCC or i-TCC are deemed inappropriate)

Considerations: Ulcer, infection, deformity, falls risk, frequency of reviews, and/or poor adherence (IV)

Imaging referrals:

- Weight bearing x-ray (IV)

Conclusive x-ray:

(Bony consolidation, fragmentation of subchondral bone, fractures, dislocation/subluxation, osteopenia, osteolysis) (IV)

- Record joint/s involved

Inconclusive x-ray:

Where clinical diagnosis remains inconclusive, further diagnostics investigations may be required to establish a diagnosis and exclude other possible causes (III)

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Confirmed acute Charcot dx:

Clinical signs/symptoms/±hx +
>2°C temperature difference at corresponding locations +
Conclusive diagnostic imaging findings (IV)

Management:

- Continue immobilisation (IV)
 - Initial TCC to be removed and re-casted after 3/7 due to significant reduction in swelling (IV)
- Education (EO)
- Ensure contra-lateral footwear is appropriate with offloading orthotic to prevent bilateral Charcot (IV)
- Oedema control if removable walker is used (EO)
- Review 1-2/52 to: (EO)
 - Re-assess infrared dermal temperatures
 - Re-cast TCC/re-assess walker fit
- Periodic follow-up x-rays as required (EO)

Referrals: (EO)

- Referral to multidisciplinary high-risk foot service
- If diabetes control suboptimal, refer to GP or endocrinology to be optimised
- OT referral for home safety assessment

Negative acute Charcot dx

Continue with immobilisation management until a definitive diagnosis is made (EO)

Potential ddx:

- Infection (osteomyelitis, cellulitis, abscess, deep tissue infection)
- Neuropathic/traumatic fracture
- DVT → refer for duplex vein scan
- Acute gout
- Inflammatory arthritis (III-2)

Average management time: 2-12 months (II)

Foot remains unstable and/or non-responsive to immobilisation:

- Referral to multidisciplinary high-risk foot service or orthopaedics for surgical review (IV)
- Consider bisphosphonates infusions (II)

Confirmed chronic Charcot dx:

Clinical signs/symptoms completely resolved
+
<2°C temperature difference at corresponding locations
for 4-6 consecutive weeks
+
Weight bearing x-ray confirming remodelling phase and
to assess chronic deformity (IV)
(Healed fractures, sclerosis of bone, absorption of bony debris, fusion and rounding of large fragments, increased bone density)

Long-term management:

- Gradual step down to partial weight bearing as required, i.e. aircast walker (IV)
- Footwear/Offloading (IV)
 - **Nil deformity:** Appropriate footwear + offloading orthotics
 - **Moderate deformity:** Custom footwear + offloading orthotics
 - **Severe deformity ± Charcot location IV or V:** CROW ± referral to multidisciplinary high-risk foot service or orthopaedics for surgical review
- Education (EO)
- Physiotherapy referral for muscle strengthening (EO)
- 3-monthly podiatry reviews of 'high-risk' patient to monitor reactivation of acute Charcot (20-30% of cases) (IV)