

Clinical vignette

Diabetic Charcot neuroarthropathy of the knee: a rare clinical entity

A 48-year-old black woman with type 1 diabetes mellitus complicated with peripheral neuropathy and grade 4 nephropathy complained of progressive pain and instability of the right knee, without previous trauma. The first knee X-ray was normal (Fig. 1A). Owing to persistence of symptoms, X-ray was repeated after 2 weeks, revealing a horizontal discontinuity of the cortical bone at the medial plate of the tibia (Fig. 1B). A non-weightbearing cast immobilization of the right limb was performed.

Two weeks later the patient was re-admitted owing to worsening of knee pain, with oedema and shortening of the right lower limb. Offloading instructions were not fol-

lowed. X-Ray of the right knee revealed a proximal medial tibial fracture with subluxation, bony destruction with fragmentation, periarticular bone formation and proximal fracture of the fibula (Fig. 1C). CT confirmed findings highly suggestive of Charcot arthropathy of the knee (Fig. 1D).

Owing to complications of diabetes, with renal and retinal deterioration and consequent surgical risk, conservative treatment is being continued, with right lower limb immobilization using a knee-ankle-foot orthosis. The patient remains under surveillance at regular appointments, with analgesic optimization. A knee arthrodesis remains on hold until medical stabilization has been achieved.

Diabetic Charcot neuroarthropathy of the knee is a rare clinical entity, as only 0.45% of all diabetic patients are likely to suffer from this condition [1]. Progressive knee pain and instability in a diabetic patient with microvascular complications, in the absence of trauma and with rapidly destructive arthropathy on X-ray, should prompt attention for this diagnosis [2].

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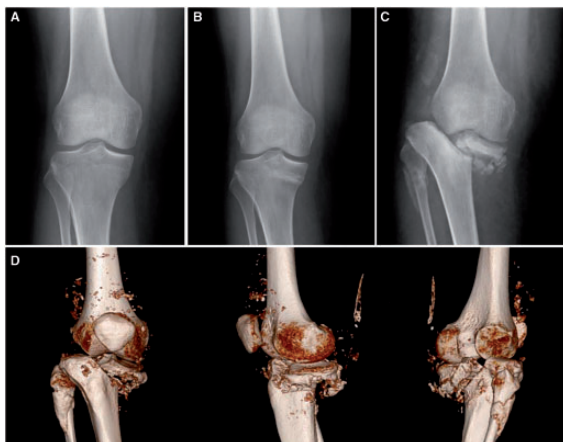
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Fig. 1 Sequential X-ray evaluation of the right knee



(A) Normal. (B) Discontinuity of the cortical bone at the level of the medial plate of the tibia. (C) Pathological fracture of the medial plate of the tibia with subluxation, bony destruction with fragmentation, periarticular bone formation and pathological fracture of the proximal head of the fibula. (D) Three-dimensional CT scan reconstruction of the right knee, showing in detail the previous Charcot arthropathy features, mainly the massive bone destruction with fragmentation and periarticular calcifications along the knee joint.

References

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