

Ischaemia is not a contraindication to casting in patients with Charcot's osteoarthropathy or non-healing ulceration

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Ischaemic diabetic feet complicated by ulceration or Charcot osteoarthropathy are not conventionally treated with casting. However, in certain circumstances, casting may be the most useful to treat ischaemic feet with these complications. We report a series of 9 patients with ischaemia in whom casting was applied for three main indications: firstly, 3 patients with an acute Charcot foot occurring in the presence of ischaemia, of which 1 patient also had a calcaneal ulcer; secondly, 3 patients with non-healing ulceration in an ischaemic foot and thirdly, 3 patients with non-healing ulcers associated with chronic Charcot deformity and ischaemia. Ischaemia was determined by absent foot pulses and damped Doppler waveforms. All patients were discussed in the combined vascular/ diabetic foot outpatient clinic and casting was agreed. Results: In the group with acute Charcot osteoarthropathy, total contact casting (TCC) was applied in all 3 patients. At presentation, the first patient had a calcaneal ulcer and unstable Charcot ankle and was treated with TCC resulting in healing of the ulcer. He underwent an infra-popliteal artery angioplasty and was then managed in a bivalve cast to accommodate the deformity and maintain stability of his ankle. The second patient developed plantar ulceration and had angioplasty of the popliteal, tibio-peroneal trunk and anterior tibial artery followed by further casting, and this resulted in healing of the ulcer and stable Charcot foot deformity. The third patient could not tolerate the cast and offloading was continued with bespoke footwear and a walking stick. With regard to the 3 patients with non-healing ulceration and ischaemia, 1 had a popliteal-anterior tibial artery bypass, 1 had a posterior tibial artery angioplasty and all of them had casting. Two patients healed and the third patient is improving. With regard to the 3 patients with stable Charcot deformity and non-healing ischaemic ulcers, all healed after casting and revascularisation. Two patients underwent tibial artery and superficial femoral artery angioplasties and 1 patient underwent a popliteal - posterior tibial bypass. Conclusion: This study has shown that when ischaemic feet are complicated either by Charcot osteoarthropathy or ulceration, casting therapy can be safely applied to achieve good outcomes and ischaemia should not be regarded as a contraindication to casting.