

# CHARCOT FOOT COMPLICATED BY OSTEOMYELITIS: A DOUBLE CHALLENGE

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Charcot osteoarthropathy is certainly the clearest demonstration of the dominant role which neuropathy may play in progressive physiological loss in the foot of a diabetic patient.

The aims of treatment are: 1) to create and maintain a plantigrade, stable foot; 2) to heal an ulceration; 3) to heal fractures; 4) to prevent deformities.

The plantar ulceration represents a very serious complication of the Charcot foot. Deformity and joint rigidity on the plantar surface of the foot creates abnormal peaks of the pressure that lead to the formation of insensitive callus that will evolve into perforating ulcers. These ulcers are characterized by callused edges and by their depth that can reach tendon, capsule and bone. The involvement of bone in the infective process is responsible for destruction of a large part of the foot that causes the need for major amputation. Recently, many authors have demonstrated that the use of external fixators applied after careful surgical debridement of the osteomyelitic bone allows limb salvage in many patients.

The protocol proposed provides a first step consisting of aggressive surgical removal of the infected bone followed by a period of negative pressure wound therapy and instillation of antimicrobial solutions. A targeted antibiotic therapy is established as indicated from microbiological examination. The second step provides surgical stabilization of the foot with use of external fixation. When debridement of osteomyelitis foci has necessitated the removal of a considerable amount of infected bone, the residual defect is filled with the use of antibiotic loaded bone cement.