

CERAMENT® G
with Gentamicin

CASE REPORT

Medical Education Series

Staged Surgical Procedure/ Limb Salvage

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PATIENT HISTORY

A 47 year old male with type II diabetes and a history of left lower extremity Charcot neuropathic foot deformity and history of ulceration, sustained a comminuted and laterally dislocated pilon fracture, severe tibiotalar joint dislocation, previous treatment includes total contact casting to treat diabetic wound and Charcot foot.

DIAGNOSIS

Left foot Charcot deformity with history of recalcitrant ulceration, acute pilon fracture with comminution and lateral dislocation, osteomyelitis to half pin sites after external fixation placement.

AIM

Provide infection-free situation for definitive internal fixation.

TREATMENT

The patient underwent initial surgical intervention, left lower extremity close reduction with external fixation, in preparation for definitive tibiotalocalcaneal arthrodesis for limb salvage surgery (two stages). Patient successfully underwent external fixation with satisfactory reduction of his fracture dislocation. Approximately 6 weeks later after application, the patient sustained a pin site infection to the half pins involving the distal tibia and mid foot, therefore requiring removal of the external fixation device. A secondary surgery was performed, external fixation device was removed, wounds were sharply debrided, and the injectable CERAMENT G paste was injected into the half pin bone voids in the distal tibia and mid foot.

HARDWARE USE

Circular ring, multi-plane external fixation device with associated half pins and olive wires.

CULTURE

Methicillin resistant staphylococcus aureus (MRSA).

OUTCOME

Patient's wounds healed unremarkably after 4 weeks of local wound care and intravenous antibiotic therapy.

NEXT STEP

Definitive internal fixation and limb salvage surgery.

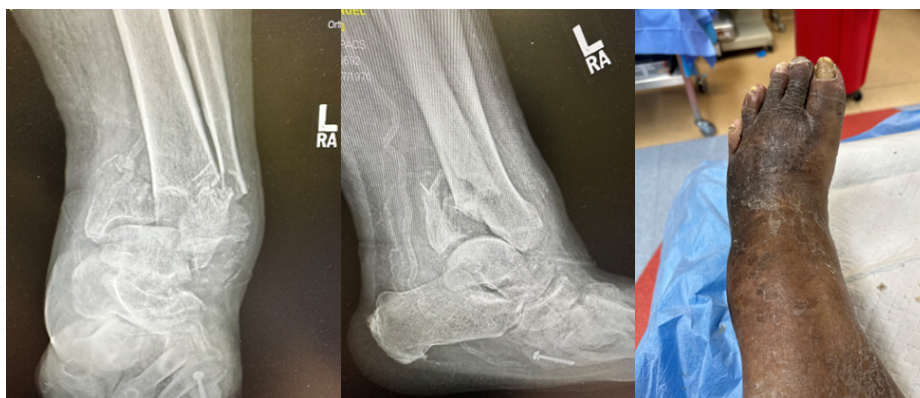


Fig. 1: Pre-operative AP ANKLE x-ray view, initial image prior to closed reduction with external fixation.

Fig. 2: Pre-operative LATERAL ANKLE x-ray view, initial image prior to closed reduction with external fixation

Fig. 3: Pre-operative image of patient's left foot



Fig. 4: Intraoperative fluoroscopy image after temporary pin fixation

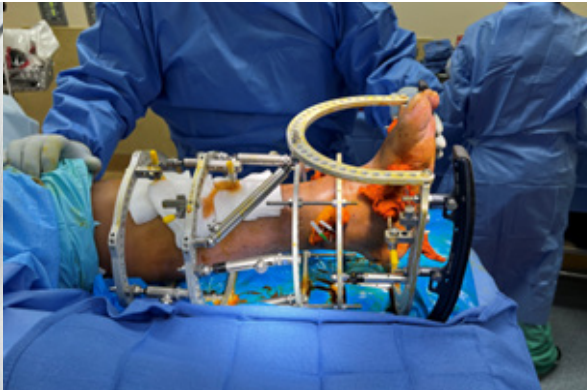


Fig. 5: Post-operative image after closed reduction of fracture/dislocation with external fixation of left lower extremity.



Fig. 6: Intra-operative image after removal of external fixation device showing pin site bone voids, s/p wound debridement and irrigation



Fig. 7: Intra-operative image of pin sites prior to application of CERAMENT G



Fig. 8: Intra-operative delivery of CERAMENT G into pin site bone voids for the treatment of osteomyelitis



Fig. 9: Intra-operative delivery of CERAMENT G into mid foot, bone void filler with local antibiotic therapy



Fig. 10: Post-op image: 4 weeks, complete healing without signs of infection



Fig. 11: Post-operative image: 4 weeks, complete pin site healing and a rectus alignment of fracture/dislocation

Advancing Osteomyelitis Management

- Bone remodeling to protect and promote bone healing
- Local antibiotic elution that is safe, consistent and clinically significant¹



¹ Stravinskas et al. 'Pharmacokinetics of gentamicin eluted from a regenerating bone graft substitute - In vitro and clinical release studies'. Bone Joint Res. 2016; 5:427-435

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