

# CASE REPORT

**Medical Education Series Chronic Osteomyelitis** JON CARLSON, MD University of Louisville Louisville, Kentucky



# **CHRONIC OSTEOMYELITIS**

#### PATIENT HISTORY

A 24 year old male sustained an open distal tibia fracture as a result of a motorcycle accident. Patient is a recovering opiate addict and a smoker. The patient suffered a fall four weeks post-surgery which resulted in a draining wound and loss of reduction with dislocation of the fracture.

#### DIAGNOSIS

Chronic osteomyelitis

### SYSTEMIC ANTIBIOTICS USED

Pre-Op: Bactrim DS

Post-Op: 6 weeks IV Vancomycin

#### **TREATMENT**

1st Surgery

Irrigation and debridement with insertion of intramedullary nail.

### 2nd Surgery

Four weeks post first surgery, patient suffered a fall resulting in draining wound medially, the loss of reduction and dislocation of the fracture. Culture was negative for bacteria.

- Debridement of purulent material
- Reaming of the canal
- Mobilization of fracture
- Additional fixation with exchange nailing and additional plate
- Filling of bony defect and augmentation of hardware by injecting void with of 5mL of CERAMENT® G
- Primary closure of wound

#### **OUTCOME**

At seven months, the patient is doing well with stable fixation, good use of leg, and appropriate resolution of infection.





1st surgery intra-op: Irrigation, debridement and placement of intramedullary nail.



1st surgery post-op.



2nd surgery pre-op. At 4 weeks post first surgery.



2nd Surgery intra-op: Revision, debridement, reaming of the canal and mobilization of the fracture.

2nd Surgery intra-op: Additional fixation with exchange nailing and additional plate.



5mls of CERAMENT G was injected to fill the bony defect and augmentation of hardware, followed by primary closure of wound.







6 weeks post-op: New bone formation is seen with full weight bearing.





Final follow up: At 7 months the patient continues to do well with no recurrence of infection.



# **Advancing Osteomyelitis Management**

- Bone remodeling to protect and promote bone healing
- Local antibiotic elution that is safe, consistent and clinically significant<sup>1</sup>

ERAMENTMIGE STERILE R

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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

# **TO ORDER**

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