

# CERAMENT® G

with Gentamicin

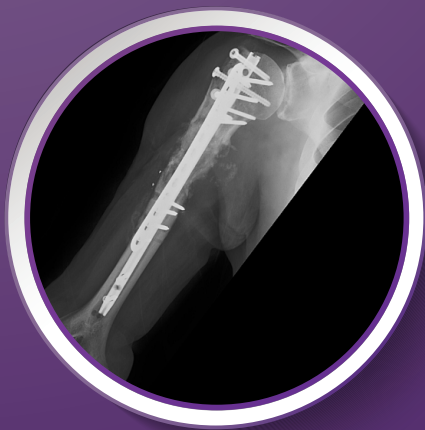
CASE REPORT

Medical Education Series

## Fracture Related Infection

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# FRACTURE RELATED INFECTION

## PATIENT HISTORY

A 74 year old male with renal cell carcinoma with osseous metastases. Patient had a pathological fracture and underwent ORIF (open reduction and internal fixation) and tumor resection of the right humerus in 2019. In 2020, he presented with an infected humeral, hardware failure and non-union for hardware removal and non-union fixation with intramedullary nail and bone cement spacer. Patient was then lost to follow-up and then presented again in 2023 with a draining sinus tract.

## DIAGNOSIS

Infected non-union of the humerus with implant failure and draining sinus tract at the proximal nail site.

## TREATMENT

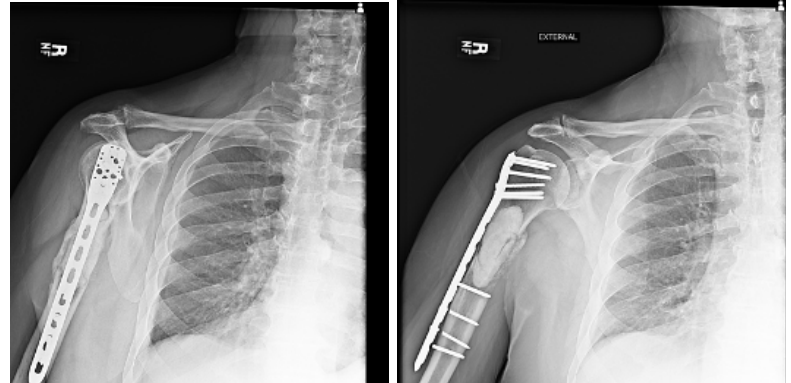
Debridement along with antibiotic beads and spacer and hardware removal, then subsequent return to operating room for repeat irrigation and debridement and implant-dependent fixation of the non-union with the intramedullary humeral nail and plate fixation.

CERAMENT® G was used to fill the existing bone void and to reduce the chance of osteomyelitis recurrence from gentamicin-sensitive microorganisms.

- Hardware used: Synthes 4.5 mm plate and Stryker humeral nail
- Bone graft used: 25mL of CERAMENT G
- Systemic antibiotics: Vancomycin and Ceftriaxone for 6 weeks

## OUTCOME

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



Initial surgery pre-op: Right humerus non-union with associated hardware failure and abscess with open wound.



Revision fixation with IM nail and spacer.

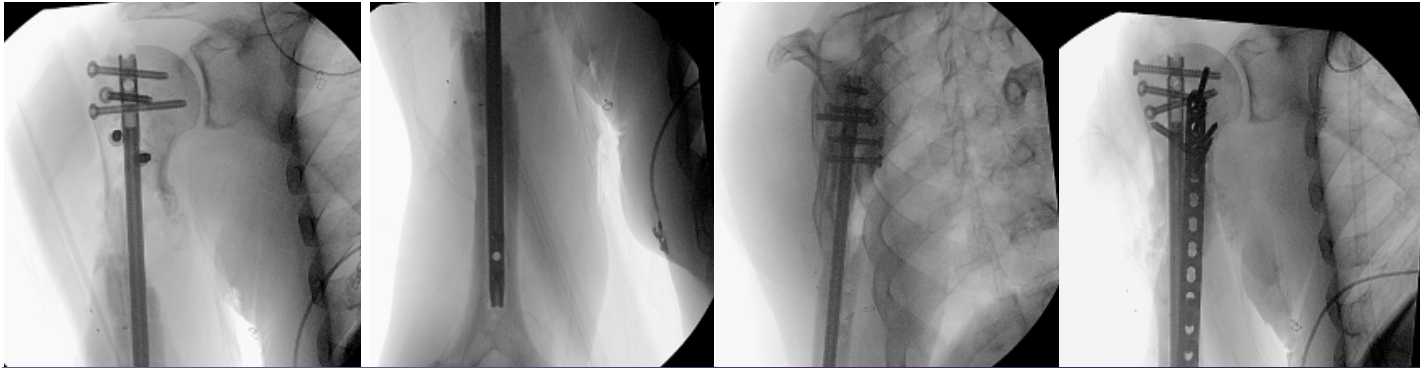


Pre-op images of infected non-union with fixation failure.

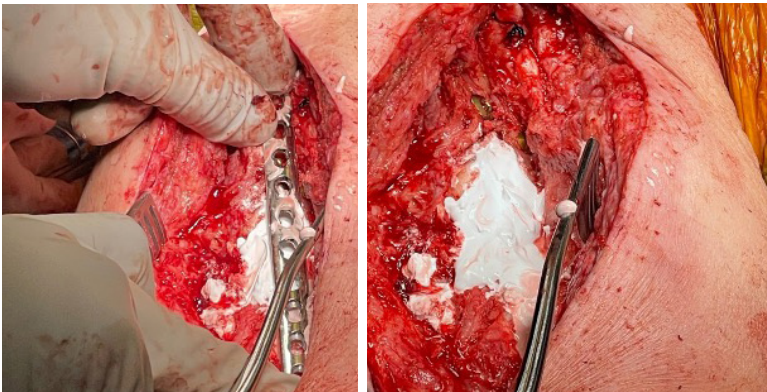


Stage 1: Hardware removal with debridement and antibiotic impregnated PMMA beads.

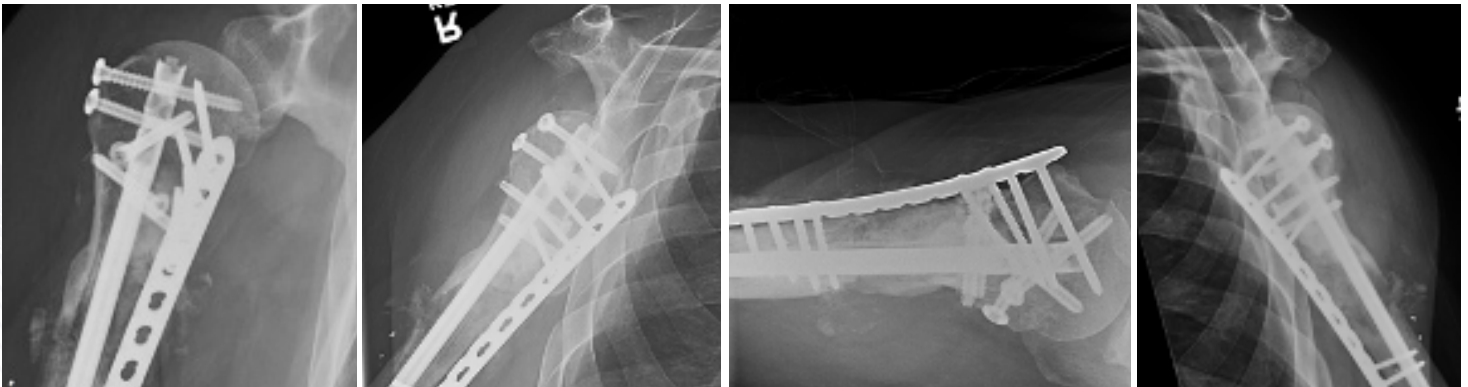
## 2nd STAGE AND POST OPERATIVE IMAGES



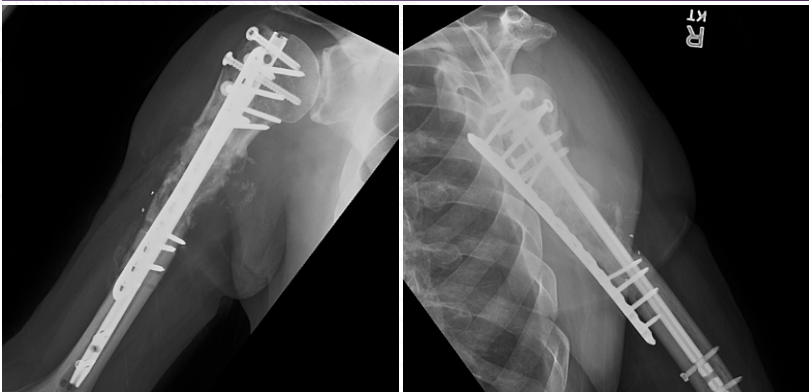
2nd stage intra-op: Existing hardware and PMMA spacer were removed and cultures taken. New nail and plate were placed in debrided bone void and filled with 25ml of CERAMENT® G.



Clinical image of CERAMENT G in resulting bone void.



1 month post-op with stable fixation.



4 month post-op with stable fixation and remodeling of CERAMENT G.



## Advancing Osteomyelitis Management

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



<sup>1</sup> 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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