CERAMENT® G
with Gentamicin

CASE REPORT

Medical Education Series

The Use of CERAMENT® G During a Two-Stage Exchange Arthroplasty with Tibial Tubercle Osteotomy

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BONESUPPORT™

THE USE OF CERAMENT G DURING A TWO-STAGE EXCHANGE ARTHROPLASTY WITH TIBIAL TUBERCLE OSTEOTOMY

PATIENT HISTORY

55-year-old female with anxiety, hypertension, and arrhythmia.

DIAGNOSIS

Presented with Chronic PJI following revision TKA 8 years prior. The patient had undergone a previous DAIR for MRSA at the original hospital and had completed 6 weeks of Vancomycin and 3 months of Bactrim. She presented to us 6 months following her DAIR treatment with continued pain and elevated inflammatory labs

TREATMENT

To aid in implant removal and removal of infectious material including all of the PMMA cement, a tibial tubercle osteotomy was planned to help facilitate this. Following the removal of the implants and thorough debridement of the PMMA cement, this created a large hollow bone void in the tibia that could compromise future fixation efforts. CERAMENT G was injected into the proximal tibia surrounding the osteotomy and metaphyseal defect at the time of placement of a static spacer with antibiotic impregnated PMMA (Figures 2A and 2B). The goal was to restore bone in the proximal tibia and to protect said bone restoration by providing high dose gentamicin elution.

HARDWARE

- Static spacer
- Smith & Nephew Legion Revision Hinge (Figures 3A and 3B)

CULTURES

- Staphylococcus epidermidis

SYSTEMIC ANTIBIOTICS

- Six weeks of intravenous antibiotics with Vancomycin and Rifampin followed by 3 months of oral antibiotics with Keflex.

OUTCOME

The tubercle osteotomy has healed. The patient is now over a year out from surgery. Patient is walking without an assistive gait aid, has excellent range of motion, and remains off antibiotics. Injection of CERAMENT G into the proximal tibia around a tibial tubercle osteotomy during stage one of a two-stage exchange arthroplasty may represent a powerful adjunct for managing PJI with metaphyseal bone loss. This approach facilitates infection eradication while biologically restoring tibial bone in the metaphysis region, improving the conditions for durable reimplantation.

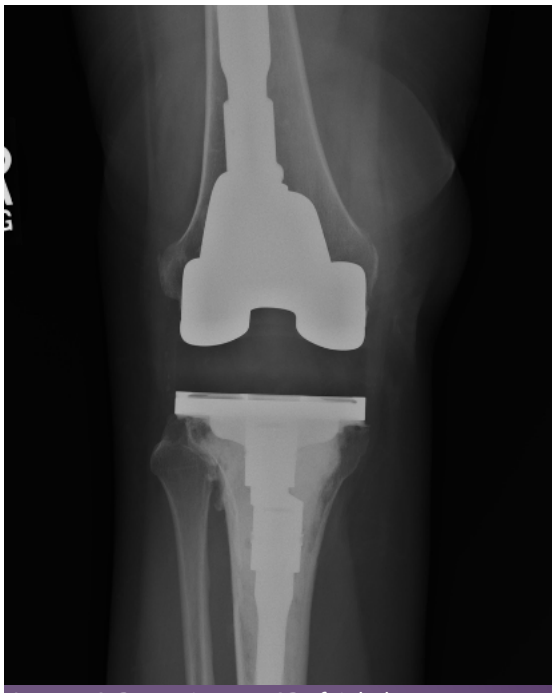

Image 1A: Pre-op images: AP of right knee.

Image 1B: Pre-op images: Lateral of right knee.

Image 2A: Initial Post-op Images: AP demonstrating CERAMENT G into the proximal tibia at tubercle osteotomy with static spacer.

Image 2B: Initial Post-op Images: Lateral demonstrating CERAMENT G into the proximal tibia at tubercle osteotomy with static spacer.

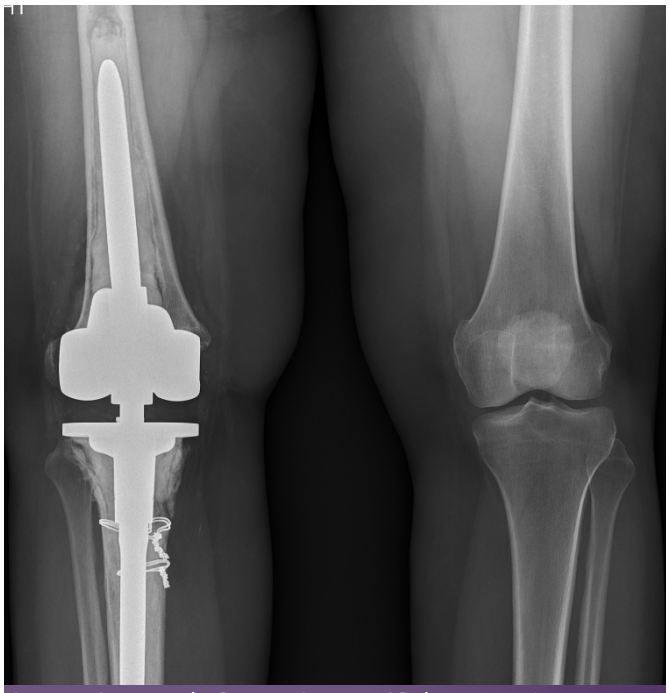

Image 3A: 3 months Post-op Images: AP demonstrating following second surgery of two-stage exchange arthroplasty with tubercle osteotomy healed.

Image 3B: 3 months Post-op Images: Lateral demonstrating following second surgery of two-stage exchange arthroplasty with tubercle.

Advancing Osteomyelitis Management

- Bone remodeling to promote and protect bone healing[1]
- Local antibiotic elution that is safe, consistent and clinically significant[2]

1. Stravinskas M, et al. Pharmacokinetics of gentamicin eluted from a regenerating bone graft substitute: In vitro and clinical release studies. Bone Joint J. 2016;5:427-
2. Ferguson et al. 'Radiographic and Histological Analysis of a Synthetic Bone Graft Substitute Eluting Gentamicin in the Treatment of Chronic Osteomyelitis'. J. Bone Joint Infect. 2019; 4(2): 76-84.

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