CERAMENT® G
with Gentamicin

CASE REPORT

Medical Education Series

Open Fracture of the Forefoot

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BONESUPPORT™

OPEN FRACTURE OF THE FOREFOOT

PATIENT HISTORY

A 39 year old male experienced a traumatic 1st metatarsal amputation and left ankle fracture due to a motorcycle accident. Patient's foot was dragged on the ground resulting in an open fracture of the left foot. His inital wound was debrided and irrigated and there was application of a wound VAC on the day of injury.

DIAGNOSIS

Open fracture with extensive degloved metatarsal

CO-MORBIDITIES

Type II Diabetes.

TREATMENT

Initial debridement and irrigation was preformed with the application of a VAC and IV antibiotics were given. 5 days later the prominent nonviable portions of the first metatarsal and the metatarsal stump was curretted. CERAMENT® G with Gentamicin was then injected and the wound was partially closed and a dermis graft was utilized to cover the remaining skin defect.

SYSTEMIC ANTIBIOTICS

Ancef.

OUTCOME

4 month post-op the wound was healing and there was no sign of reinfection.

The wound was inspected at the time of the revision surgical debridement and grafting. Exposed bone (1st metatarsal) and nonviable skin were noted. Pre-op x-rays show a traumatic amputation of the 1st metatarsal.

The wound was debrided and the available skin and soft tissue were used to reduce the wound size. This provided some bone coverage of the end of the 1st metatarsal remainder. CERAMENT G was injected in the 1st metatarsal. A meshed dermis graft was applied over the wound for coverage.

5 days post operative image showed the viable dermis graft and granular tissue forming below the graft.

At 2 weeks post-op, progressive granular tissue is noted to be coming through the dermis graft. The post-op x-rays show resorption of some of the CERAMENT G in the 1st metatarsal.

At 1 month post-op, the granular tissue fully grown through the dermis graft.

At 2 months post-op, the CERAMENT G is mostly resorbed in the bone and no periostitis or bone erosions are noted; therefore, no evidence of osteomyelitis. The wound continues to slowly heal. Collagen dressings have been used to facilitate healing.

4 month post-op the wound was healing and there was no sign of reinfection.

Advancing Osteomyelitis Management

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

1. 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.

2. 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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