

## Salvage of Diabetic Foot Osteomyelitis With Antibiotic Impregnated Cement Spacer- Long Term Follow Up

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**Introduction/Purpose:** Diabetic foot infections (DFI) with osteomyelitis often requires minor amputation as a mean to achieve adequate debridement and infection eradication. In the past years we have developed and used a method of utilizing antibiotic impregnated cement spacer (ACS) in DFI surgeries. The ACS release antibiotic locally, fill the cavity created by the extensive debridement of infected bone and stabilize the area to encourage healing. This is a long term report on using ACS in cases of severe DFI.

**Methods:** 67 cases of severe forefoot DFI with osteomyelitis in 56 consecutive patients (one patient could have several cases in different times and/or sites), mean age  $57 \pm 11.7$  years. Follow-up was 6 to 125 months (mean  $39.7 \pm 30$  months). Extensive meticulous debridement followed ACS to fill the gap were employed in all cases. ACS contained Gentamycin and Vancomycin routinely and Amikacin in selected cases. Deep cultures were taken routinely. Stabilization was usually achieved Fixation with Kirschner Wires. Success defined as resolution of infection and wound healing without amputation.

**Results:** Of the 67 cases 50 (75.7%) healed in 45 patients. Of the 12 patients (17 cases) who did not heal 4 required toe amputation, 2 ray amputation, 1 transmetatarsal amputation and 5 trans tibial amputation.. Of the ACSs: 23 left permanently 12 removed and arthrodesis was performed, and 15 removed without arthrodesis. Two patients recovered but subsequently underwent trans-tibial amputation (after 18 months and 5 years) due to infection in different site.

**Conclusion:** ACS is effective and sometimes indispensable adjunct in the surgical treatment of forefoot DFI with osteomyelitis, when extensive debridement is undertaken to eradicate the infection without amputation. ACS stabilizes the infected part; fill the void created by the debridement and release locally broad spectrum antibiotic.

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