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Use of High Purity Calcium Sulphate impregnated with Vancomycin and Gentamycin in an effort to salvage the 1st ray in a gentleman with osteomyelitis.

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Many diabetic foot ulcers become infected and go on to develop osteomyelitis. Traditionally osteomyelitis has been managed surgically by debridement or amputation. More recently there is good evidence for the use of antibiotics to either avoid amputations or reduce the level of surgical intervention. Antibiotic impregnated methyl methacrylate beads and absorbable gauze have also been used post operatively. We would like to present a case of a 67yr old gentleman with type 2 diabetes who attended with a neuropathic ulcer to his left hallux. He was known to our clinic as we were managing an ulcer to his right mid-foot where he had a Charcot arthropathy. Our initial treatment regime included oral antibiotic therapy and off-loading. X rays carried out at presentation showed no evidence of osteomyelitis. The left hallux ulcer initially responded well. At his follow up appointment toe had become swollen with a blow-out ulcer to the medial aspect of the hallux. Repeat X rays showed what was evident clinically i.e. osteomyelitis and interphalangeal joint destruction. We discussed our options within the multidisciplinary team involving the patient. Surgical management would be to amputate the hallux. Our concern was risk of re ulceration as he had a Charcot arthropathy to his right foot and a body mass index of 37. We decided to continue with conservative management, changing his antibiotics to Clindamycin. Marginal improvement was noted after 2 weeks. A needle bone biopsy was carried out after stopping his antibiotics for 4 days and these were changed to IV Ertapenem and Ticchoplanin. X rays 2 weeks later showed the osteomyelitis had now affected the metatarso-phalangeal joint. Surgery was inevitable. As a last effort to prevent an amputation surgical debridement was carried out, the bone was fenestrated and Calcium Sulphate mixed with Vancomycin and Gentamycin was used to fill the cavities. This surgery was carried out as a day-case under local anaesthesia. The initial result seem encouraging, 2 weeks post operatively the toe has reduced in size. His IV antibiotics have been changed to oral Doxycycline as per microbiology sensitivities. **Discussion:** The way in which we manage foot infections particularly osteomyelitis varies from centre to centre, one of the determining factors is whether the team is lead by a surgeon or a physician. There are drawbacks to both long term use of antibiotics and to radical surgery. Perhaps there is a place for the use of localised antibiotics delivered into the wound as an alternative to both the above.