

Case Report Using Absorbable Calcium Sulphate Antibiotic Carrier in Chronic Osteomyelitis of Right Femur

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INTRODUCTION:

Chronic osteomyelitis is a common orthopedic problem that causes disabling conditions and impact on life quality globally. STIMULAN- an absorbable calcium sulfate antibiotic carrier which can be used by placing directly in bone and soft tissue with mixing antibiotic in the musculoskeletal infections.¹

REPORT:

28-year-old gentleman with no known medical illness was involved in road traffic accident, and diagnosed close right femur fracture 2016, and treated with intermedullary nail over right femur. However, he developed infection and undergone multiple wound debridement in subsequent years.

He was presented with discharging wound and pain over his lateral right thigh for 3 months, was diagnosed with chronic osteomyelitis of right femur. On 19th December 2023, operation was performed, sinusectomy, bone curettage and insertion of stimulan absorbable antibiotic carrier over right femur, 1g vancomycin powder and 240mg gentamicin was mixed with stimulan and was made into beads, and inserted over the involucrum and periosteum of right femur.

RESULT

2 months post-operatively noted stimulan was completely reabsorbed, and patient was infection free and walking with no pain, right thigh wound completed healed, currently the patient is under clinic follow-up.



Figure 1: Intraop stimulan insertion over right femur

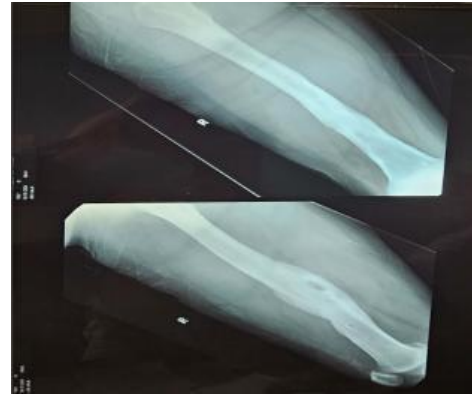


Figure 2: Right femur complete reabsorption of stimulan after 2 months of operation

DISCUSSION:

By using stimulan absorbable calcium sulfate having multiple advantage compared to PMMA, polymethylmethacrylate as there no need of second surgical procedure for bead removal, longer antibiotic elusion time over 40 days, helps in dead space management, as well as reduces risk of antibiotic resistance due prolonged release of antibiotic at subtherapeutic levels.²

CONCLUSION:

Absorbable calcium sulphate beads impregnated with vancomycin and gentamicin could be employed as alternative product for chronic osteomyelitis treatment.

REFERENCES:

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