

عنوان مقاله:

The Use of Calcium Sulphate Beads in the Management of Osteomyelitis of Femur and Tibia: A Systematic Review

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خلاصه مقاله:

Background: Calcium sulphate is a recent alternative for delayed antibiotic elution in infected bones and joints. The purpose of this study is to evaluate the use of antibiotic impregnated calcium sulphate (AICS) beads in the management of infected tibia and femur, with regards to patient outcomes and complication rates (including reinfection rate, remission rate and union rate). Methods: Searches of AMED, CINAHL, EMBASE, EMCARE, Medline, PubMed and Google Scholar were conducted in June ۲۰۲۰, with the mesh terms: "Calcium sulphate beads" or "Calcium sulfate beads" or "antibiotic beads" or "Stimulan" AND "Bone infection" or "Osteomyelitis" or "Debridement" AND "Tibia" or "Femur". Risk of bias was assessed using the Risk of Bias in Non-randomised Studies of interventions (ROBINS-i) tool, and quality assessed via the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) criteria. Results: Out of ۱۰۴ relevant papers, ۱۰ met the inclusion criteria for data extraction. Total infection remission was ۶.۸%, which was greater than that of polymethylmethacrylate (PMMA, ۲۱.۲%). Complication rates varied. The main issue regarding AICS use was wound drainage, which was considerably higher in studies involving treatment of tibia alone. Studies using PMMA did not experience this issue, but there were a few incidences of superficial pin tract infection following surgery. Conclusion: Where AICS was used, it was consistently effective at infection eradication, despite variation in causative organism and location of bead placement. Wound drainage varied and was higher in papers regarding tibial cases alone. Level of evidence: III

کلمات کلیدی:

antibiotic beads, bone infection, calcium sulphate beads, long-bone osteomyelitis, Stimulan

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