

Role of the antibiotic carrier in the treatment of bone and joint infections: a case report

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Background

The treatment of bone and joint infections is complicated due to the reduced penetration capacity of the antibiotics available within these tissues.

Case History

At November 2022, a 13-year-old patient presented in the Emergency Department for intense and sudden pain in the left coxo-femoral joint. The medical history revealed a surgery to stabilize the femur fracture, due to a road accident, performed with external fixators in May 2022 and then removed in October 2022. The patient was transferred to the Orthopedic Department for investigation. The patient presented fever. Laboratory data showed an increase of inflammation indices. Due to suspected femoral head infection bone fragments were obtained for culture examination. Bone culture was positive for the presence of

Staphylococcus warneri. The patient was treated with a systemic therapy with trimethoprim + sulfamethoxazole 800/160x3 die and rifampicin 600 mg/die and underwent a surgery with spacer placement. During the procedure, antibiotic Carrier (StimulanTM) medicated with cefideracol 1000 mg + vancomycin 1000 mg + gentamicin 240 mg was placed. The post-operative course was without complications and the patient was discharged home with trimethoprim-based oral antibiotic + sulfamethoxazole 800/160 mg twice daily. At the follow-up after ten days, the patient was stable and blood exams showed a normalization of the inflammation markers.

Discussion

The use of StimulanTM medicated with specific antibiotics against the isolated pathogen was safe and effective in the treatment of bone infection.