

Abstract:

A key factor in the successful management of periprosthetic joint infection (PJI) besides the surgical regime is a consistent antimicrobial therapy. Recently the OVIVA (oral versus intravenous antibiotics for bone and joint infection) trial demonstrated non-inferiority of oral antimicrobial therapy compared to IV, implying that an early transition to oral administration is reasonable. It is likely that the international consensus meeting of musculoskeletal Infections (ICM) and the European Bone and Joint Infection Society (EBJIS) will consider these findings. However, rising levels of antimicrobial resistance are challenging and recommendations for dealing with multi-drug resistant (MDR) pathogens resistant to oral antibiotics are lacking. This study focus on establishing guidance towards their management in PJI. From December 2015 to June 2019 patients with MDR pathogens were included in a single-centre prospective cohort study and treated with self-administered outpatient parenteral antimicrobial therapy (S-OPAT) based on a two-stage revision strategy. Demographics, pathogens, antimicrobial agents and outcomes were recorded. A total of 1,738 outpatient days in 26 patients were analyzed. The incidence of pathogens resistant to oral antibiotics in PJI was 4%, most frequent encountered were staphylococcus epidermidis. The Kaplan-Meier-estimated infection-free survival after 3 years was 90% (95% CI, 84.6% to 95.5%). We recorded adverse events in 6 of 54 (11%) S-OPAT episodes (3.45/1,000 S-OPAT days). (i) S-OPAT in two-stage revision arthroplasty to counter increasing numbers of MDR pathogens resistant to oral agents can achieve a high infection eradication rate and (ii) should therefore be taken into account at the next society's consensus treatment updates.

Reference:

Frieler S, Hanusrichter Y, Bellova P, Geßmann J, Schildhauer TA, Baecker H. Facing multidrug-resistant pathogens in periprosthetic joint infections with self-administered outpatient parenteral antimicrobial therapy (S-OPAT)-A prospective cohort study. *J Orthop Res.* 2020 Nov 11. doi: 10.1002/jor.24906. Epub ahead of print. PMID: 33174643.