The implementation of an outpatient i.v. therapy using peripherally inserted central catheters (PICCs) allows for early discharge with continuation of adequate antimicrobial therapy” Baecker et al (2019).

Abstract:

BACKGROUND: A key factor in the successful treatment of periprosthetic joint infection is the consistent antimicrobial therapy. Depending on the pathogen antimicrobial susceptibility, intravenous (i.v.) antibiotics may not be switched to oral medication at patient discharge, without risking a treatment failure. The implementation of an outpatient i.v. therapy using peripherally inserted central catheters (PICCs) allows for early discharge with continuation of adequate antimicrobial therapy.

METHODS: We prospectively evaluated the systematic use of PICC in 11 patients with periprosthetic joint infection. Inclusion criterion was the detection of a pathogen that cannot be optimally treated with oral antibiotics according to the current treatment concept (Trampuz et al.).

RESULTS: A total of 12 PICCs in 11 patients were analysed. An error or mechanical nerve irritation was not observed. The occurrence of a catheter-related bloodstream infection (CRBSI) was not recorded. None of our patients had PICC-associated infections, thrombophlebitis or thrombosis. One patient stopped therapy due to a lack of compliance.
Ten patients successfully completed their treatment. At a mean follow-up of 29 months, successful infection eradication as measured by the Delphi criteria was achieved in 100%.

CONCLUSION: Although the number of patients included in the study was small, our short-term results suggest a good applicability of PICCs in the outpatient i.v. antimicrobial therapy for treatment of periprosthetic joint infection. Catheter-associated complications could not be observed in our collective. The successful infection control in all cases despite proven difficult-to-treat infection is promising.

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