

Target driven antibiotic therapy using peripherally inserted central catheter (PICC) lines in the management of foot infection as outpatient treatment | Alejandro, O Shitta-Bey, M Bates, T Jemmott, P Vas, ME Edmonds Diabetic Foot Clinic, King's College Hospital, London, UK

We report 47 episodes of home intravenous (I.V.) antibiotic therapy to treat diabetic patients who presented to the Diabetic Foot Clinic with foot infection requiring parenteral antibiotic therapy. We avoided admission to hospital by administering I.V. antibiotics, using the peripherally inserted central catheter (PICC) lines. The mean age of patients was 57 ± 12.5 years (mean \pm SD) and 7 patients had type 1 diabetes and 40 had type 2 diabetes. Patients were followed up in the Foot Clinic until the completion of their antibiotic therapy and the subsequent removal of the PICC line.

The microbiology of the infections consisted of the following organisms: *Staphylococcus aureus* was isolated in 14 cases and these were treated with Ceftriaxone (5), Teicoplanin (2), Flucloxacillin (2), Tazocin (3) and Ertapenem (2); β -haemolytic Group B *Streptococcus* was isolated in 2 cases and these were treated with Ceftriaxone (2). *Pseudomonas aeruginosa* was isolated in 2 cases, which were treated with Tazocin (1) and Colistin (1). Methicillin-resistant *Staphylococcus aureus* was isolated in 5 cases which were treated with Teicoplanin (4) and Vancomycin (1). *Escherichia coli* was isolated in 2 cases which were treated with Meropenem (1) and Tigecycline (1). *Citrobacter* was isolated in 3 cases which were treated with Tazocin (3). Mixed anaerobes were isolated in 2 and were treated with Ertapenem (2). A negative growth was reported in 17 cases of nevertheless clinically infected feet and these were treated with Tazocin (7) Ceftriaxone (3), Teicoplanin (4) and Ertapenem (3). The duration of antibiotic therapy was 10 weeks (5-20) and the duration of PICC line in situ was 12 weeks (5-20). C-reactive protein at the start of therapy was 69 ± 47.2 mg/L and significantly fell to 9 ± 8.4 mg/L at the end of the I.V. therapy ($P < 0.001$). In 24 cases there was complete resolution of infection on I.V. antibiotic therapy, which was then stopped. In the remaining 23 cases, after initial improvement on I.V. therapy, oral antibiotic administration was continued after removal of the PICC line.

In conclusion, successful treatment of diabetic foot infection can be achieved at home using targeted I.V. antibiotics through PICC lines as outpatient treatment avoiding hospital admissions.