Abstract:

The use of antibiotic lock solutions (ALSs) for the prevention of catheter-related blood stream infections (CRBSIs) is a promising option. The efficacy and safety of linezolid as ALS were evaluated in a randomized double-blind prospective study where 131 patients who required nontunneled catheter (NTC) for hemodialysis (HD) were randomized to receive an ALS with either (A) unfractionated heparin (2000 U/ml) alone as a catheter lock control, (B) vancomycin (5 mg/ml) + heparin (2000 U/ml), or (C) linezolid (2 mg/ml) + heparin (2000 U/ml). The primary endpoint of the study was CRBSI. A total of 152 NTCs were inserted in 131 patients. The linezolid-locked group did not present any infective episode (CRBSI rate = 0/1000 catheter days) compared with 2 episodes in the vancomycin-locked group (CRBSI rate = 1.21/1000 catheter days, p = 0.1021) and 11 episodes in the heparin-locked group (CRBSI rate = 6.7/1000 catheter days, p = 0.0001). Median number of catheter days was greater in group C (median = 38) compared with group B (median = 36, p = 0.0415) and with group A (median = 34, p = 0.0036). No side effects and no resistant organisms were recorded with the use of linezolid ALS. Linezolid appears to be a safe and effective ALS, preventing CRBSI and prolonging the survival of the catheter in HD patients.