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Abstract (poster session)

**Efficacy and safety of high-dose daptomycin (>6 mg/kg) treatment for complicated Gram-positive infections**

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Background. Gram-positive cocci can cause severe and complicated infections. Experimental and clinical studies suggest that daptomycin may be superior at high daily dose (>6 mg/kg) compared to currently recommended doses (4 or 6 mg/kg). We evaluated the efficacy and safety of high-dose daptomycin treatment in patients with severe and completed infections caused by gram-positive cocci. Methods. We included patients aged >=18 years, who presented with implant-associated, osteoarticular, surgical site or bloodstream infections caused by staphylococci or enterococci at our institution between January 2009 and April 2012. Patients received high-dose daptomycin therapy (>6mg/kg) once daily as short infusion. In renal insufficiency (creatinine clearance <30 ml/min) the dosing interval was prolonged to 48 hours. Follow-up evaluation was performed by review of subsequent hospital admissions or outpatient visits (if available) and by contacting patients or their general practitioners. Results. During the study period, 72 patients were included (67% males; median age, 67 years; range, 23-83 years), presenting with implant-associated infections in 36 cases (50%), bone and joint infections in 26 cases (36%), surgical site infections in 5 (7%) and bloodstream infections in 5 (7%). S. aureus was cultured in 38 patients (84% were MRSA and 1 was VISA), coagulase-negative staphylococci in 36 patients (78% were MR) and enterococci in 9 patients (none resistant to vancomycin). Daptomycin was administered for a median of 17 days (range, 5-89 days) with the following distribution: >6 to 8 mg/kg (28%), >8 to 10 mg/kg (40%), >10 mg/kg (32%). Clinical cure was observed in 64 cases (89%) with a median time of follow-up 21 months (range, 0 days - 3.5 years). Five patients (7%) died during their hospital stay. Adverse events were observed in 13 patients (18%), including asymptomatic CK (n=6, 8.3%), eosinophilic pneumonia (n=3, 4.2%), skin rash (n=2, 2.8%), rhabdomyolysis (n=1, 1.4%) and acute renal failure (n=1, 1.4%). All adverse events resolved after discontinuation of daptomycin. No correlation between the daily or cumulative daptomycin dose and occurrence or severity of adverse events was observed. Conclusions. High-dose daptomycin (>6 mg/kg once daily) in severe or complicated gram-positive infections was associated with high treatment efficacy (89%) and favorable safety profile. Severe adverse events included eosinophilic pneumonia (4.2%) and rhabdomyolysis (1.4%).