

Clinical experience with daptomycin for the treatment of patients with osteomyelitis.

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Data from a registry were analyzed to describe the clinical experience with daptomycin (Cubicin; Cubist Pharmaceuticals, Inc., Lexington, MA) for the treatment of patients with osteomyelitis. The Cubicin Outcomes Registry and Experience (CORE) 2004 database was used to identify patients treated for osteomyelitis. Posttherapy follow-up outcome assessments were collected for a subset of these patients. A total of 67 patients with osteomyelitis were clinically evaluable for outcome at the end of daptomycin therapy and had outcome assessed at a posttherapy visit. The median follow-up interval after the last dose of daptomycin was 76 days (range, 1 to 547 days). The median initial dose was 5.6 mg/kg (range, 3.2 to 7.5 mg/kg), and the median duration of therapy was 35 days (range, 3 to 546 days). Daptomycin was given concurrently with other antibiotics in 48% of cases. Methicillin-resistant *Staphylococcus aureus* was the most common pathogen (45%). Clinical outcomes at follow-up were cure, 42 (63%); improved, 13 (19%); failure, 7 (10%); and nonevaluable, 5 (7%). A total of 82% of patients with an orthopedic device (n = 17) were successfully treated, as were 88% of patients with concurrent bacteremia (n = 16). Failures were more likely if surgical debridement was not performed (24% vs. 5%; P = 0.045). The clinical success rate for patients treated with an initial daptomycin dose >4 mg/kg was significantly higher than for patients treated with an initial dose < or =4 mg/kg (88% vs. 65%; P = 0.013, chi2 test). Daptomycin had a 94% success rate when used alone with no follow-up antibiotics. The results indicate that daptomycin is being used in clinical practice to treat patients with osteomyelitis caused by gram-positive pathogens including MRSA. Prospective, controlled clinical trials of daptomycin are warranted that include rigorous data collection and long-term follow-up analysis.

PMID: 17904946 [PubMed - indexed for MEDLINE]