

O437

1-hour Oral Session

Endocarditis

Effectiveness and safety of daptomycin in patients with endocarditis undergoing heart valve replacement: a subgroup analysis from a real-world study

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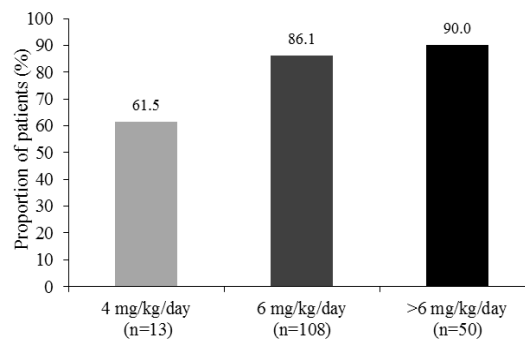
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Background: Cardiac valve dysfunction is a major complication of infective endocarditis (IE) and often requires heart valve replacement in addition to antibiotic therapy. *Staphylococcus aureus*, both methicillin-susceptible and methicillin-resistant (MRSA), is the most frequent causative pathogen of IE. Daptomycin is indicated for treating right-sided IE due to *S. aureus* at a dose of 6 mg/kg/day, although higher doses (≥ 8 mg/kg/day) are also used and recommended by national and international guidelines 1, 2. This subgroup analysis of European Cubicin® Outcomes Registry and Experience (EU-CORE), a retrospective, non-interventional, multicentre registry, reported real-world clinical experience of daptomycin use for the treatment of Gram-positive infections in patients with IE who had undergone heart valve replacement.

Methods: Patients from 18 countries, who received at least one dose of daptomycin between 2006 and 2012, were enrolled in EU-CORE. Patients were followed up until 2014. Data from patients with IE who had undergone heart valve replacement were analysed. Clinical outcomes were assessed as success (cured or improved), failure or non-evaluable. Adverse events (AEs) were recorded during daptomycin treatment and for up to 30 days post-treatment.

Results: Of 610 patients with IE, 198 had undergone heart valve replacement (166 [83.8%] patients had left-sided IE, 21 [10.6%] had right-sided IE and 11 [5.6%] had both left- and right-sided IE). The median age was 58.0 (range, 10–84) years, and 69 (34.8%) patients were aged ≥ 65 years. Most significant underlying diseases other than cardiovascular disease were renal disease (18.2%) and diabetes mellitus (15.2%). Major pathogens in patients with positive cultures (68.0%) were *S. aureus* (36.8%; MRSA, 34.9%) and coagulase-negative staphylococci (CoNS; 31.6%). Overall, 54.5% of patients received daptomycin 6 mg/kg/day and 25.3% received daptomycin doses > 6 mg/kg/day. The median duration of daptomycin treatment was 21 (range, 1–112) days. Concomitant antibiotics were prescribed in 76.8% of patients as inpatient therapy, most commonly aminoglycosides (29.3%) and carbapenems (18.2%). Daptomycin resulted in high clinical success rates in patients with *S. aureus* (88.4%; MRSA, 80%) and CoNS (81.0%) infections, with an overall success rate of 83.3%. Numerically higher clinical success rate was reported with high-dose (> 6 mg/kg/day) daptomycin (figure).

Figure. Clinical success rates by daptomycin dose



The overall clinical success rate in patients followed up for 2 years was 90.7% (39/43). AEs and serious AEs possibly related to daptomycin were reported in 6 (3.0%; including 3 cases of creatine phosphokinase elevation) and 4 (2.0%) patients, respectively.

Conclusions: Daptomycin was effective and well tolerated in the treatment of patients with Gram-positive IE who had undergone heart valve replacement. A trend of better clinical outcome was observed with high-dose daptomycin. The two-year follow-up data showed a high sustained response.

References

1. Gould et al. J Antimicrob Chemother 2012; 67: 269–289
2. Habib et al. ESC Guidelines 2015