Oritavancin Longitudinal In Vitro Activity Against Gram-positive Organisms from USA Medical Centers: Results from the SENTRY Antimicrobial Surveillance Program for 2010-2014

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Abstract

Background: Oritavancin is approved in the USA and European Union for the treatment of aerobic and anaerobic bacterial infections. The study investigated oritavancin activity against MDR/GNR organisms from USA medical centers during 2010-2014 as part of the SENTRY Antimicrobial Surveillance Program (ASPR). Oritavancin was highly active against MDR/GNR organisms during this period.

Methods: Activities of oritavancin were determined against 20,055 clinical isolates (12,271 aerobic, 7,784 anaerobic) from 2010 to 2014 by the CLSI broth microdilution method. Sensitivity results were tabulated by laboratory standard for analysis. Minimal inhibitory concentrations (MIC) were interpreted by the Clinical and Laboratory Standards Institute (CLSI) M100-S20. Testing was performed using quality control (QC) strains supplied by the CLSI, and QC results were performed for each run.

Results: Oritavancin MIC50 and MIC90 values of ≤0.03 and ≤0.06 µg/ml, respectively, were obtained against the CLSI susceptibility breakpoints. The lowest MIC value observed was 0.015 µg/ml, and a concentration of 0.015 µg/ml was also achieved against 100% of S. aureus isolates in the study. The MIC distributions were stable during the study period. Activities against S. aureus, E. faecalis, and E. faecium were compared with comparator agents such as daptomycin (MIC ≤0.5 µg/ml), linezolid (MIC ≤0.06 µg/ml), and vancomycin (MIC ≤0.5 µg/ml). Linezolid and vancomycin displayed lower activities against these organisms compared to oritavancin. Oritavancin displayed lower activities against S. pneumoniae, S. pyogenes, and S. agalactiae compared to the other tested agents.

Conclusions: Oritavancin was highly active across the entire time period against a broad range of MDR/GNR isolates, including S. aureus, E. faecalis, and E. faecium. The activities against these MDR/GNR organisms were consistent with those observed in recent years.

Table 1. Activity of oritavancin against contemporary (2010-2014) USA isolates. 


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Table 2. Antimicrobial activity of oritavancin and comparator agents against isolates from 2010-2014.


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Table 3. Activity of oritavancin and comparator agents against USA isolates from 2010-2014.


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References


Disclosures

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