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Update of Oritavancin and Comparator Agent In Vitro Activities Against Gram-positive Clinical Isolates Responsible for Documented Skin and Skin Structure Infections in the USA (2014)

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Abstract

Background: Oritavancin was approved in the USA (2014) for the treatment of acute bacterial skin and skin structure infections (SSIs) caused by Gram-positive pathogens. This study provides an updated in vitro activity for oritavancin against clinical isolates from USA medical centers and comparator agents.

Methods: 1,774 isolates were collected from documented SSI in 27 sites in the nine USA Census regions, as part of the SENTRY Antimicrobial Surveillance Program

Results: Oritavancin (MIC ≤ 0.06 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against Staphylococcus aureus, Enterococcus faecalis, Streptococcus pyogenes and Streptococcus agalactiae and ≥ 1/1 µg/mL against Enterococcus faecium, Enterococcus faecalis, Enterococcus gallinarum, Enterococcus hirae and Enterococcus harbinense. Vancomycin (MIC ≤ 0.06 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against E. faecalis, E. hirae, E. harbinense, E. gallinarum, E. faecium and E. faecalis, ≥ 0.03/0.06 µg/mL against E. faecalis, E. hirae and E. harbinense and ≥ 8/16 µg/mL against E. gallinarum and E. faecium. Clindamycin (MIC ≤ 0.25 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against E. faecalis, E. hirae, E. harbinense, E. gallinarum and E. faecium and ≥ 4/8 µg/mL against E. gallinarum and E. faecium. Amoxicillin (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against E. faecalis, E. hirae, E. harbinense, E. gallinarum and E. faecium and ≥ 2/4 µg/mL against E. gallinarum and E. faecium. Penicillin (MIC ≤ 0.06 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against E. faecalis, E. hirae, E. harbinense, E. gallinarum and E. faecium and ≥ 0.12/0.25 µg/mL against E. gallinarum and E. faecium. Tetracycline (MIC ≤ 0.25 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against E. faecalis, E. hirae, E. harbinense, E. gallinarum and E. faecium and ≥ 4/8 µg/mL against E. gallinarum and E. faecium. Streptococcus pyogenes/anginosus (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. pyogenes, S. anginosus, S. mitis/oralis and S. intermedius and ≥ 2/4 µg/mL against S. intermedius. Streptococcus mutans (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. mutans and ≥ 4/8 µg/mL against S. mutans. S. iniae (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. iniae and ≥ 2/4 µg/mL against S. iniae. S. agalactiae (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. agalactiae and ≥ 2/4 µg/mL against S. agalactiae. S. epidermidis (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. epidermidis and ≥ 2/4 µg/mL against S. epidermidis. S. mitis/oralis (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. mitis/oralis and ≥ 2/4 µg/mL against S. mitis/oralis. S. suis (MIC ≤ 0.25 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. suis and ≥ 2/4 µg/mL against S. suis. S. sanguinis (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. sanguinis and ≥ 4/8 µg/mL against S. sanguinis. S. constellatus (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. constellatus and ≥ 2/4 µg/mL against S. constellatus. S. gallolyticus (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. gallolyticus and ≥ 4/8 µg/mL against S. gallolyticus. S. mitis (MIC ≤ 0.5 µg/mL) showed mode MICs of ≤ 0.06 µg/mL against S. mitis and ≥ 2/4 µg/mL against S. mitis. S. salivarius (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. salivarius and ≥ 4/8 µg/mL against S. salivarius. S. sanguinis (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. sanguinis and ≥ 4/8 µg/mL against S. sanguinis. S. intermedius (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. intermedius and ≥ 4/8 µg/mL against S. intermedius. S. pyogenes (MIC ≤ 0.12 µg/mL) showed mode MICs of ≤ 0.004 µg/mL against S. pyogenes and ≥ 4/8 µg/mL against S. pyogenes.

Conclusions: Oritavancin exhibited potent in vitro activity relative to comparator agents against this collection of Gram-positive clinical isolates causing SSI in USA medical centers during 2014.

Disclosures

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