
Tedizolid has been approved for treatment of acute bacterial skin and skin structure infections (ABSSSI) in the United States.

This scenario has prompted the inclusion of MRSA and Enterococcus faecium (E. faecium) in the testing regimens for antibacterial susceptibility testing. This study investigated the clinical susceptibility of Staphylococcus aureus and enterococcal clinical isolates from US and European hospitals to tedizolid, linezolid, and vancomycin.

In addition, the clinical utility of tedizolid for the treatment of ABSSSI was assessed by measuring its clinical success rates in clinical trials.

The study also evaluated the clinical success rates of tedizolid in patients with ABSSSI, and compared these results to those of linezolid and vancomycin.

Materials and Methods

Antimicrobial susceptibility testing

A total of 1626 S. aureus isolates and 2449 enterococci were collected during the period 2011-2014 from 117 US and European hospitals. The isolates were then tested for susceptibility to tedizolid, linezolid, and vancomycin. The MIC values were determined using the broth microdilution method according to CLSI guidelines.

In the CLSI method, the MIC is defined as the lowest concentration of antibiotic that inhibits visible growth of the target microorganism.

Results

Tedizolid had MIC50 and MIC90 values against vancomycin-susceptible S. aureus and E. faecium (vancomycin MIC50/90, 1/2 µg/mL; 97.9% susceptible) that were similar to those for tedizolid (MIC50/90, 0.12/0.25 µg/mL) against vancomycin-susceptible S. aureus and E. faecium.

However, tedizolid was more active against vancomycin-resistant S. aureus and E. faecium than vancomycin.

Tedizolid had MIC50 and MIC90 values against E. faecium (vancomycin MIC50/90, 1/2 µg/mL; 97.9% susceptible) that were similar to those for tedizolid (MIC50/90, 0.12/0.25 µg/mL) against E. faecium.

In contrast, tedizolid was less active against vancomycin-susceptible S. aureus than vancomycin.

Tedizolid had MIC50 and MIC90 values against S. aureus (vancomycin MIC50/90, 1/2 µg/mL; 100.0% susceptible) that were similar to those for tedizolid (MIC50/90, 0.12/0.25 µg/mL) against S. aureus.

In contrast, tedizolid was less active against vancomycin-resistant S. aureus than vancomycin.

In conclusion, tedizolid is a promising agent for the treatment of ABSSSI, particularly in patients with vancomycin-resistant S. aureus and E. faecium.