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Oritavancin Activity Against Gram-Positive Pathogens Causing Bloodstream Infections in Hematology/Oncology and Transplant Units in US Medical Centers (2010–2019)

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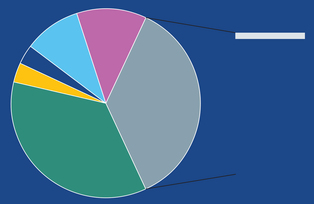
Introduction

- Bacterial bloodstream infections (BSI) complicate the course of immunocompromised patients, significantly contributing to morbidity and mortality.
- Rising antimicrobial resistance rates may impact the efficacy of empirical and target antibiotic treatment in high-risk patients undergoing hematologic, oncologic, and/or transplant treatment.
- Appropriate antimicrobial management is crucial for patients with suspected or confirmed BSI.
- We evaluated the in vitro activity of oritavancin and comparators against Gram-positive isolates causing BSI in patients from hematology/oncology and Uº,f=©§ Úû € qCC — 3R$ GF!‡T–(| xuqQxuVS4 rG• s∫ET$∫R$W$„i % uXT C,dÀ G C — 5"@ • % ! y‰S Ib‡À ‡W ‡U" P` Ið Q y yT$∫R$` Vr … H X‰ C,–Å 40™qC5"@ñ P ! … ˆT–(| xuqQxuYB 4_ … „8 T$∫R$` Rï P † #! 8&Å G 0™qQ5"@ðU P I B)T–(| xuqQxuYA˜ 4Ÿ P H–T…BH5"F 4žð€0` "7%a 3€\ € qCC — 3R$ Iƒ,RT–(| xuqQxuW7Q €%_ —‰IT$∫R$X ï % ™d`A 8&L € qT0™qSR$ ð Q P9U–T–(| xuqQxuYB 4Ÿ % P1hEBH5"F 5nñ P VGS, Viridans group streptococci.

Methods

- A total of 1,217 Gram-positive isolates causing bloodstream infections in HTU patients were consecutively collected during 2010–2019 as part of the SENTRY Antimicrobial Surveillance Program.
- A single isolate per patient was collected in 33 US medical centers located in all 9 US Census Divisions.
- Only isolates determined to be significant by local criteria as the reported probable cause of infection were included in the program.
- Bacterial identification was performed by MALDI-TOF (Bruker Daltonics, Billerica, MA, USA) and/or standard microbiological testing methods.
- Antimicrobial susceptibility testing was performed using CLSI broth microdilution methodology in a central laboratory (JMI Laboratories).
- CLSI M100 (2022) breakpoints were applied for comparator agents.
- For in vitro comparisons, the oritavancin CLSI susceptible breakpoints for S. aureus (0.12 mg/L) and vancomycin-susceptible E. faecalis (0.12 mg/L) were applied to all Staphylococcus spp. and Enterococcus spp. isolates, respectively.
- The oritavancin CLSI susceptible breakpoints were applied for -hemolitic streptococci (BHS; 0.25 mg/L) and Viridans group streptococci (VGS; 0.25mg/L).
- Oritavanin and comparators were also evaluated against MRSA, MRCoNS, and VRE resistant subsets, as well as, a subset of susceptible dose-dependent E. faecium isolates displaying high daptomycin MIC values (2–4 mg/L).



[a] The oritavancin susceptible breakpoint published for S. aureus (0.12 mg/L) was applied to all CoNS isolates per CLSI M100 (2022) criteria.

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