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P1882 Oritavancin activity against *Staphylococcus aureus* clinical isolates causing serious infections in hospitalised patients in Europe (2017-2018)

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Background: *Staphylococcus aureus* has the ability to invade body sites that are normally free from microorganisms and cause serious health care-associated infections. Treatment of invasive infections, mainly those caused by less susceptible isolates (eg, methicillin-resistant *S. aureus* [MRSA]) remains a challenge. Oritavancin is a potent lipoglycopeptide antibiotic approved by the FDA/EMA for treating skin and soft tissue infections. Oritavancin's convenient one-time dosing regimen is a desirable option for serious gram-positive infections requiring prolonged treatment courses. This study assessed the activity of oritavancin and comparators against a contemporary collection of *S. aureus* isolates causing serious infections in Europe.

Materials/methods: A total of 1,232 *S. aureus* isolates were recovered from invasive infections during 2017-2018 from 33 medical centres in 13 European and adjacent countries/regions. *S. aureus* was most frequently recovered from bloodstream infections (BSIs; 77.8% of all isolates), followed by pneumonia (17.2%), bone and joint infections (BJIs; 3.1%), and intra-abdominal infections (IAIs; 1.9%). Bacterial identification was confirmed by MALDI-TOF, and isolates were susceptibility (S) tested according to CLSI and EUCAST methods.

Results: Overall, oritavancin (MIC_{50}/MIC_{90}, 0.03/0.06 mg/L) inhibited all *S. aureus* isolates at ≤0.12 mg/L (susceptible breakpoint). Testing against MRSA (23.3% of all *S. aureus*) and methicillin-susceptible *S. aureus* (MSSA) groups yielded similar oritavancin MIC_{50} (0.03 mg/L) and MIC_{90} (0.03-0.06 mg/L) results regardless of infection type (Table). MRSA rates varied greatly among European countries (0%-46.6%), but oritavancin MIC_{50}/MIC_{90} values remained at 0.03/0.03-0.06 mg/L. MSSA isolates showed high overall susceptibility rates (≥98.0%) to oritavancin, vancomycin, teicoplanin, linezolid, and clindamycin. These agents, except clindamycin, remained active against MRSA isolates, regardless of infection type; however, oritavancin had MIC_{50}/MIC_{90} results 16- to 32-fold lower than vancomycin, teicoplanin, and linezolid. Overall, 3 teicoplanin-resistant *S. aureus* isolates (MIC >2 mg/L) were observed; 2 of them showed vancomycin MIC results of 2 mg/L and all were inhibited by oritavancin MIC values between 0.03 and 0.12 mg/L.

Conclusions: The lipoglycopeptide oritavancin remained potent against *S. aureus*, including MRSA, causing serious infections in European medical centres and surrounding regions. Its prolonged half-life and high potency may support oritavancin as a good option for treating serious *S. aureus* infections.

Phenotype Infection type (no. isolates)	MIC_{50}/MIC_{90} in mg/L (%S; EUCAST)		
	Oritavancin	Vancomycin	Teicoplanin
MSSA (945)	0.03/0.03 (100)	1/1 (100)	0.5/0.5 (99.9)
BSI (712)	0.03/0.03 (100)	1/1 (100)	0.5/0.5 (100)
Pneumonia (185)	0.03/0.06 (100)	1/1 (100)	0.5/0.5 (99.5)
IAI (17)	0.03/0.06 (100)	1/1 (100)	0.5/0.5 (100)
BJI (31)	0.03/0.03 (100)	1/1 (100)	0.5/1 (100)
MRSA (287)	0.03/0.06 (100)	1/1 (100)	0.5/1 (99.3)
BSI (247)	0.03/0.06 (100)	1/1 (100)	0.5/1 (99.6)
Pneumonia (27)	0.03/0.06 (100)	1/1 (100)	0.5/1 (100)
IAI (6)	0.03/ - (100)	1/ - (100)	0.5/ - (83.3)
BJI (7)	0.03/ - (100)	1/ - (100)	0.5/ - (100)