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E0006 Activity of ceftobiprole and comparators against European respiratory-tract isolates of MSSA and MRSA from 2016

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Background: Ceftobiprole is an advanced-generation cephalosporin with potent activity against Gram-positive and -negative bacteria, including notable activity against methicillin-resistant *Staphylococcus aureus* (MRSA). To date it is approved for clinical use in 13 European countries and several non-European countries for the treatment of community-acquired pneumonia and hospital-acquired pneumonia (excluding ventilator-associated pneumonia) in adults. The present study investigated the activity of ceftobiprole against respiratory tract isolates of MRSA and methicillin-susceptible *Staphylococcus aureus* (MSSA).

Materials/methods: A total of 315 clinical isolates of MSSA (from 15 countries) and 429 MRSA (from 13 countries) from respiratory-tract infections were collected from Europe during 2016 and tested for susceptibility to 13 different antibiotics. MICs were determined by broth microdilution and susceptibilities interpreted according to EUCAST methodologies.

Results: Susceptibility data for ceftobiprole and select comparators are shown in the Table.

Antibacterial	%S	%I	%R	MIC_{90}	MIC range
			MSSA (N = 315)		
Ceftobiprole	100	0.0	0.0	0.5	0.06 – 0.5
Daptomycin	100	0.0	0.0	0.5	0.12 – 1
Erythromycin	78.1	0.6	21.3	> 4	0.25 – >4
Levofloxacin	94.9	0.0	5.1	0.25	0.06 – >4
Linezolid	100	0.0	0.0	2	0.5 – 2
Trimethoprim/sulfamethoxazole	100	0.0	0.0	≤ 0.06	≤ 0.06 – 2
Vancomycin	100	0.0	0.0	0.5	≤ 0.25 – 1
			MRSA (N = 429)		
Ceftobiprole	100	0.0	0.0	2	0.25 – 2
Daptomycin	100	0.0	0.0	0.5	0.12 – 1
Erythromycin	29.1	0.0	70.9	> 4	0.25 – >4
Levofloxacin	22.1	0.0	77.9	> 4	0.06 – >4
Linezolid	99.3	0.0	0.7	2	0.25 – >4
Trimethoprim/sulfamethoxazole	99.3	0.2	0.5	0.12	≤ 0.06 – >4
Vancomycin	100	0.0	0.0	1	≤ 0.25 – 2

*%S, %I, %R, percent susceptible, intermediate or resistant, respectively

Conclusions: Overall, ceftobiprole exhibited 100% susceptibility against both MSSA and MRSA isolated from respiratory tract infections across Europe. These data further support the therapeutic use of ceftobiprole for the treatment of respiratory tract infections due to *S. aureus*.