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Paper Poster Session

Susceptibility trends for old and new antibiotics

In vitro activity of tigecycline and comparators against extended spectrum beta-lactamase (ESBL) positive isolates of *Escherichia coli* and *Klebsiella pneumoniae* from Germany

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Background: Worldwide dissemination of gram-negative bacteria producing extended-spectrum β -lactamases (ESBLs) has proved problematic in many countries. The Tigecycline European Surveillance Trial (TEST) monitors the activity of tigecycline and other antimicrobials against clinically-relevant pathogens collected globally. This study reports the activity of tigecycline in TEST isolates collected in Germany during the course of this surveillance study with a focus on populations exhibiting the ESBL phenotype.

Material/methods: Non-duplicate clinical isolates of *E. coli* and *K. pneumoniae* from German medical centers were collected during 2004-2015 from defined infection sites. Organism identification and antibiotic susceptibility testing was performed by the local laboratories. Susceptibility testing was performed using broth microdilution according to CLSI guidelines and categorical interpretation of results was done using EUCAST breakpoints.

Results: The table provides MIC and susceptibility data for tigecycline and comparators against ESBL-positive populations.

Organism (n)	Drug	% Susceptible	% Resistant	MIC _{50/90}	MIC range
<i>E. coli</i>, ESBL-Positive (432)	Amikacin	92.6	2.6	2/8	≤0.5->64
	Levofloxacin	31.0	68.8	8/>8	≤0.008->8
	Meropenem	99.5	0.0	≤0.06/0.12	≤0.06-4
	Pip/Tazo	75.7	16.2	4/64	0.25->128
	Tigecycline	98.4	0.0	0.25/0.5	0.03-2
<i>K. pneumoniae</i>, ESBL-Positive (260)	Amikacin	88.1	4.6	2/16	≤0.5->64
	Levofloxacin	36.2	55.0	4/>8	0.015->8
	Meropenem	94.3	3.3	≤0.06/1	≤0.06->16
	Pip/Tazo	48.1	40.4	16/>128	0.5->128
	Tigecycline	75.8	8.9	0.5/2	0.12-8

Conclusions: Tigecycline and meropenem provided similar activity (>98% susceptible) against ESBL-positive *E. coli* isolates from Germany. ESBL-positive *K. pneumoniae* isolates were less susceptible to most agents tested when compared to *E. coli* isolates. Country specific monitoring is essential to follow the susceptibility patterns of ESBL isolates for common gram-negative pathogens.