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Abstract (publication only)

Tigecycline-susceptibility observed among Gram-negative pathogens, including carbapenem-resistant isolates, isolated from patients hospitalised in the United Kingdom; TEST Program 2004-2011

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Objectives: Tigecycline (TIG) is active against most gram-negative (GN) enteric and some non-enteric pathogens, including multidrug-resistant (MDR) isolates. The TEST Program has monitored resistance rates among important pathogens for several antimicrobial classes worldwide, including TIG, a unique glycylycylcycline agent. This study demonstrated the activity of TIG among commonly isolated GN pathogens collected in UK hospitals from the TEST Program (2004-2011). Methods: Thirteen investigators from the UK provided 4,523 gram-positive and GN isolates during this study period. Five significant GN pathogens collected (n \geq 100) included *Klebsiella* spp. (KSP), *E. coli* (EC), *Enterobacter* spp. (EBS), *Acinetobacter* spp. (ASP), and *Serratia* spp. (SER). Isolates were tested locally by broth microdilution using CLSI guidelines and susceptibility (S) % is reported using both CLSI and EUCAST breakpoints. Results: The table lists S % using CLSI/EUCAST breakpoint criteria. FDA or EUCAST criteria used for TIG breakpoints; na- no EUCAST or CLSI breakpoints ESBL rates among KSP and EC were 23.0 and 16.9%. TIG showed activity against ESBL-positive EC (100.0 %S) and KSP (90.7%S). Carbapenem resistance was observed only for EBS (11 isolates) and ASP (16 isolates). TIG S was 100% among the carbapenem-resistant EBS strains and MIC₉₀ values were only two-fold higher for ASP among carbapenem-S (1 mg/L) vs. carbapenem-resistant strains (2 mg/L) for this species. Conclusions: The pathogens presented in this study are commonly isolated from complicated skin and skin structure and intra-abdominal infections and both are among the indications for tigecycline use. Slight differences in S were observed applying CLSI vs. EUCAST breakpoints. Tigecycline, amikacin and meropenem were shown to have activity against these common GN pathogens from hospitals in the UK.

	KSP	EC	EBS	ASP	SER
N	278	268	229	134	100
Amikacin	99.6/98.6	98.9/94.0	98.7/95.2	94.0/94.0	100.0/98.0
Cefepime	89.2/77.3	86.9/78.0	94.3/77.7	79.1/na	100.0/94.0
Ceftriaxone	74.5/74.5	76.5/76.5	58.1/58.1	58.2/na	87.0/87.0
Levofloxacin	88.9/86.7	67.5/67.2	92.6/87.3	77.6/76.9	97.0/88.0
Meropenem	100.0/100.0	100.0/100.0	97.9/98.6	88.5/88.5	100.0/100.0
Pip Tazo	86.3/80.2	90.7/86.6	79.5/76.0	78.4/na	97.0/95.0
Tigecycline	97.5/93.5	100.0/100.0	96.5/92.6	na/na	99.0/92.0