

R2582

Abstract (publication only)

**In vitro activity of tigecycline and comparator agents among *Escherichia coli* and *Klebsiella* spp., including extended-spectrum beta-lactamases (ESBL)-producing isolates from Nordic countries: TEST program 2004-2011**

D. Biedenbach\*, I. Morrissey, M. Hackel, D. Hoban, S. Bouchillon, B. Johnson, H. Leister-Tebbe (Schaumburg, US; Epalinges, CH; Collegeville, US)

Objectives: Nordic countries typically have had lower rates of bacterial resistance to antimicrobial agents compared to other European countries based upon surveillance literature. This study documents the susceptibility of tigecycline (TIG), a glycylcycline with potent activity against most enteric pathogens, and comparator agents tested against *E. coli* (EC), *Klebsiella pneumoniae* (KPN) and *K. oxytoca* (KOX) from Denmark, Finland, Norway and Sweden. This analysis includes the activity of these agents against strains that produce ESBL enzymes in these four Nordic countries. Methods: EC (944), KPN (643) and KOX (269) isolates were collected from multiple infection sources and tested for susceptibility (S) to TIG and comparators using CLSI and EUCAST breakpoint criteria during the TEST 2004-2011 program. Isolates were tested locally using broth microdilution by CLSI methods and quality assurance using appropriate ATCC strains tested concurrently. Disk approximation testing according to CLSI was performed to confirm ESBL-producing isolates. Results: The table shows the %S for isolates tested from Nordic countries using CLSI, EUCAST or FDA breakpoints. a CLSI/EUCAST breakpoint criteria; FDA/EUCAST criteria used for TIG. bAll *Klebsiella* spp. combined. The ESBL rates in these four Nordic countries were 8.7, 5.8 and 3.0% for EC, KPN and KOX, respectively. Overall ESBL rates were highest in Finland (12.1%) compared to Denmark (7.7%), Sweden (4.3%) and Norway (4.2%). Conclusions: Amikacin, meropenem and TIG were active against all EC, including ESBL-producing strains from these countries. Slightly lower TIG activity was observed among the *Klebsiella* spp. Although lower ESBL rates were observed in these Nordic countries compared to other regions of Europe from literature sources, continued monitoring of resistance remains critical to establish trends of resistance and monitor the utility of current therapeutic agents.

	EC	ESBL+ EC	KSP <sup>b</sup>	ESBL+ KPN	ESBL+ KOX
N	944	82	918	37	8
Amikacin	99.5/98.8	100.0/98.8	99.9/99.5	97.3/86.5	100.0/100.0
Cefepime	93.6/89.1	35.4/3.7	96.1/92.5	32.4/10.8	50.0/37.5
Ceftriaxone	88.6/88.6	1.2/1.2	91.1/91.1	0.0/0.0	0.0/0.0
Levofloxacin	85.9/88.3	31.7/29.3	94.6/93.3	45.9/43.2	62.5/62.5
Meropenem	99.5/99.7	100.0/100.0	100.0/100.0	100.0/100.0	100.0/100.0
Pip-Tazo	96.5/95.2	86.6/76.8	94.4/91.5	81.1/59.5	62.5/62.5
Tigecycline	100.0/99.9	100.0/100.0	97.2/91.9	91.9/78.4	100.0/100.0