

Session: P059 Activity of newer and older antimicrobials against Gram-negative organisms

Category: 3b. Resistance surveillance & epidemiology: Gram-negatives

24 April 2017, 12:30 - 13:30  
P1267

**In vitro activity of piperacillin-tazobactam and comparators against Enterobacteriaceae from multiple infection sources encountered in selected European countries: TEST data 2013-2016**

Daryl Hoban<sup>1</sup>, Martha Renteria<sup>1</sup>, Daniel Sahm<sup>2</sup>, Meredith Hackel<sup>\*1</sup>, Heidi Leister-Tebbe<sup>3</sup>

<sup>1</sup>International Health Management Associates, Inc.

<sup>2</sup>Ihma; Microbiology

<sup>3</sup>Pfizer, Inc.

**Background:** Infections with species in the family *Enterobacteriaceae* play a significant role in infections in both the community and in hospitals due to their prevalence, diversity and ability to cause a variety of infections. Monitoring of antimicrobial resistance is necessary for effective therapy. Susceptibility data from The Tigecycline European Surveillance Trial (TEST) program was evaluated to monitor the activity of piperacillin-tazobactam and comparative antimicrobial agents against pathogens isolated from multiple infection sources in both in patients and outpatients in ten European countries since 2013.

**Material/methods:** Hospital sites in selected European countries collected 27655 *Enterobacteriaceae* isolates from multiple infection sources 2013-2016. MICs were determined locally using supplied micro-broth panels following CLSI guidelines for broth microdilution, and categorical results were interpreted using current EUCAST guidelines.

**Results:** The *in vitro* activity of piperacillin-tazobactam and comparators against *Enterobacteriaceae* are shown below.

Enterobacteriaceae	Drug %S/MIC <sub>90</sub>						
	AMK	FEP	CRO	LVX	MEM	TZP	TGC
Spain (6464)	98.6/4	81.1/16	74.4/> 32	76.8/> 8	98.4/0.25	82.6/64	92.6/1
Italy (5350)	90.3/8	66.6/> 32	61.7/> 32	64.7/> 8	90.0/2	73.4/> 128	89.4/2
Germany (5275)	98.8/4	84.0/8	77.0/> 32	86.0/4	99.2/0.12	85.2/32	93.6/1
France (4087)	98.3/4	76.4/32	68.8/> 32	83.4/8	99.6/0.12	81.5/32	92.6/1

Belgium (2224)	98.0/4	82.0/8	72.4/> 32	79.9/8	98.8/0.12	79.8/64	92.6/1
Portugal (1308)	97.3/8	75.2/32	66.7/> 32	74.3/> 8	98.7/0.25	73.7/128	90.1/1
Switzerland (999)	99.5/4	89.1/2	80.1/32	90.2/1	100/0.12	89.5/16	96.7/1
United Kingdom (828)	98.6/4	87.8/2	81.6/32	93.6/0.5	99.3/0.12	87.0/32	94.4/1
Ireland (580)	98.1/4	68.5/> 32	59.3/> 32	79.1/8	99.1/0.25	74.8/64	91.4/1
Netherlands (540)	99.8/4	93.9/≤ 0.5	88.9/4	95.6/0.5	99.8/0.12	92.2/8	96.7/1

---

AMK=Amikacin, FEP=Cefepime, CRO=Ceftriaxone, LVX=Levofloxacin, MEM=Meropenem, TZP=Piperacillin-Tazobactam, TGC=Tigecycline

**Conclusions:** Regardless of country, MEM and TZP were the most active beta-lactams antimicrobials tested against *Enterobacteriaceae*. Italy overall showed the lowest % susceptible for all drugs tested except for CRO that was slightly lower in Ireland. Tigecycline and amikacin demonstrated > 89% activity against *Enterobacteriaceae* studied. The evolving nature of resistance to both beta-lactams and other classes of drugs underscores the need for continuous and careful surveillance.