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Abstract (poster session)

Reduced carbapenem susceptibility in the Bacteroides fragilis group – findings from the TEST programme 2007-2010

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Background: Bacteroides fragilis group organisms are important anaerobic co-pathogens in many polymicrobial infections. Reduced susceptibility to carbapenems in B. fragilis group is due primarily to the metallo-beta-lactamase CfiA gene (meropenem MICs 1-4) with high-level resistance secondary to acquired upstream insertion sequences (IS) causing expression of CfiA (MICs >16). Methods: The Tigecycline European Surveillance Trial (TEST) evaluated 164/1842 (8.9%) B. fragilis group organisms with reduced susceptibility to carbapenems (meropenem MIC >= 1 mg/L) from a collection of anaerobes spanning four years, 2007 - 2010. The isolates were identified to the species level at the participating sites and confirmed by a central laboratory. MICs were determined by the central laboratory using agar dilution according to CLSI guidelines. Results: MIC90 (mg/L)/% susceptible* of B. fragilis group with meropenem MICs of >= 1 mg/L by year (n/n total B. fragilis group isolates): *EUCAST breakpoints used where available; CLSI breakpoint used for cefoxitin; FDA breakpoint used for tigecycline (Tygacil®, 2009). Conclusions: B. fragilis group isolates with reduced susceptibility to meropenem increased significantly between 2007-2010 ($p<0.05$, Fisher's exact test). Greater than 93% of these isolates were susceptible to tigecycline and metronidazole, with no significant reduction in susceptibility for any of the compounds tested over the four years of analysis.

	2007(40/506)	2008(33/430)	2009(45/541)	2010(46/365)
Tigecycline	2/100	4/97.0	2/97.8	4/93.5
Metronidazole	2/100	2/100	1/100	1/97.8
Pip-Tazo	16/80.0	32/84.9	64/77.8	32/78.3
Meropenem	8/70.0	8/54.6	>8/42.2	>8/52.2
Clindamycin	>8/65.0	>8/60.6	>8/64.4	>8/56.5
Cefoxitin	>32/52.5	>32/57.6	>32/55.6	>32/43.5