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Abstract (poster session)

Prevalence of extended-spectrum beta-lactamases in Europe: 2004-2011

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Background: Infection by extended-spectrum beta- lactamase (ESBL)-producing bacterial pathogens is increasing worldwide, with the prevalence of ESBLs in Europe varying greatly from country to country. Patients with infections caused by an ESBL-producing organism are at increased risk of treatment failure. The Tigecycline European Surveillance Trial (TEST), a longitudinal surveillance study, determined the ESBL status and antibiotic susceptibilities to tigecycline and comparator compounds for 21,149 Escherichia coli, Klebsiella oxytoca, and Klebsiella pneumoniae, from 25 European countries from 2004 to 2010. Methods: 21,073 isolates (10,814 E. coli, 2,648 K. oxytoca, 7,687 K. pneumoniae) from 14 Western European and 11 Eastern European countries were analyzed in this survey. The isolates were identified to the species level at the participating sites and confirmed by the central laboratory. MICs were determined by each site using supplied broth microdilution panels and interpreted according to EUCAST guidelines. ESBL testing was performed by Laboratories International for Microbiology Studies (LIMS), a subsidiary of International Health Management Associates, Inc. (IHMA, Schaumburg, IL, USA) following CLSI guidelines. Results: Results are shown in the following figure. Conclusions: Linear trends in the prevalence of ESBLs in Eastern and Western Europe for the years 2004 to 2010 continue to increase significantly ($p < 0.00001$, Cochran-Armitage test). The percentage of ESBL+ E. coli, K. oxytoca, and K. pneumoniae isolates in 2010 was 16.7% in Western Europe and 24% in Eastern Europe. The percentage varies greatly from country to country, ranging from 0% in Finland to 41% in Italy.

