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Abstract (poster session)

In vitro antibacterial activity of tigecycline against 434 multidrug-resistant pathogens in Germany and a central European area, 2010

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Objectives: Tigecycline has been shown to be active against a wide range of Gram-positive and Gram-negative bacteria, including multidrug-resistant (MDR) strains. In Germany, it has been available for clinical use since 2006. The present study was conducted to evaluate the in vitro activity of tigecycline (TGC) against MDR strains recovered during a multicentre resistance surveillance study conducted by the Paul-Ehrlich-Society between October and December 2010. Methods: Of the 5,802 clinical isolates collected from 25 laboratories located in Germany (n=21), Switzerland (n=3), and Austria (n=1), the following 434 MDR isolates were selected for the present study: 21 carbapenem-non-susceptible isolates of the Acinetobacter baumannii-group (CARB-NS ABA), 100 Stenotrophomonas maltophilia (SMA), 175 Enterobacteriaceae with an ESBL phenotype (109 Escherichia coli [ECO], 16 Klebsiella oxytoca [KOX], 47 K. pneumoniae [KPN], and three Proteus mirabilis [PMI]), 100 methicillin-resistant Staphylococcus aureus (MRSA) and 38 Vancomycin-resistant Enterococcus faecium (VRE). Species confirmation and susceptibility testing were performed in a central laboratory (Antiinfectives Intelligence). MICs were determined by the microdilution method according to the standard ISO 20776-1 and interpreted by EUCAST criteria, if applicable. Results: The majority of MDR isolates (n=257; 59.2%) were recovered from male patients. Patients ranged in age from <1 to 97 years (median 67 years). Two hundred and fifty-five (58.8%) isolates were obtained from patients on general wards, 140 (32.3%) from ICU-patients and 38 (8.8%) from outpatients. The source of one strain was unknown. MIC50/MIC90 values of TGC for CARB-NS ABA and SMA isolates were 1/4 mg/L and 0.5/2 mg/L, respectively. PMI strains were TGC-resistant, as expected, while all but three ESBL-producing KPN isolates and 100% of ECO, KOX, MRSA, and VRE isolates were TGC-susceptible. Conclusion: Four years after its introduction into the German market, TGC demonstrated favorable in vitro activity against MDR-isolates from the central European area. Consequently, TGC remains a valid treatment option for infections in which MDR pathogens are involved.