Antimicrobial Activity of Ceftaroline and Comparator Agents Against Contemporary (2010) Strepococcus pneumoniae Isolates from Latin America

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Abstract

Background: Ceftaroline (CPT) is the active component of the prodrug CPT foae, a novel cephalosporin exhibiting broad-spectrum bacterial activity in vitro against Gram-positive organisms including S. pneumoniae (SPN) and multiresistant (MDR)-SPN. This study determined activity of CPT against recent (2012) SPN isolated in Latin America.

Methods: Susceptibility testing for CPT and commonly used antimicrobials was performed by Clinical and Laboratory Standards Institute (CLSI) broth microdilution methodology on a total of 212 isolates from the 2010 Assessing Worldwide Antimicrobial Resistance Evaluation (AWARE) Surveillance Program. In vitro results were compared to recent susceptibility/resistance rates (CLSI and EUCAST, 2012 for comparators). In absence of CLSI breakpoints, USA-FDA breakpoints were applied [Teflaro Product Insert, 2010]. Interpretation of results was performed by CLSI (2012) and EUCAST (2012, 2013 for ceftriaxone) with the latter as the comparator.

Results: CPT MIC and susceptibility were superior compared to penicillin, erythromycin, levofloxacin, tetracycline, and trimethoprim/sulfamethoxazole (TMP/SMX) tested against S. pneumoniae (Tables 1 and 2).

Conclusions: This study demonstrated the potent in vitro activity of CPT against recent (2012) SPN isolated from Latin America. Overall, CPT was very active against all isolates with limited clinical outcomes information about strains in the Latin America region.

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