Cefepime-Zidebactam (WCK 5222) Activity Tested against Gram-Negative Organisms Causing Bloodstream Infections Worldwide

HS SADER, M CASTANHEIRA, JM STREIT, LR DUNCAN, RK FLAMM
JLM Laboratories, Northboro, MA, USA

Abstract

Introduction

Cefepime-zidebactam, a tetrazole-based cephalosporin/beta-lactamase inhibitor combination, was tested against a worldwide collection of bloodstream isolates to determine its potential as a treatment for carbapenem-resistant and carbapenemase-producing Enterobacteriaceae (CPE/CPA).

Materials and Methods

Organism collection

Isolates were consecutively collected from 105 medical institutions worldwide, including the United States (US; 331 isolates from 36 medical centers), Europe (1,050 isolates from 49 medical centers), the Asia-Pacific region (AP; 393 isolates from 13 medical centers), Latin America (200 isolates from 8 medical centers), and Canada (120 isolates from 11 medical centers).

In vitro antimicrobial activity tested against Gram-negative organisms producing clinically relevant beta-lactamases.

Table 1 Summary of cefepime-zidebactam 1:1 activity against isolates collected from patients hospitalized with bloodstream infections

Table 3 Activity of cefepime-zidebactam 1:1 and comparator antimicrobial agents

Acknowledgments

This study was supported by bloodstream IA AG.

References


Huang HY, Shier KL, Goldz C (2014). Determining a clinical framework for use of cefepime and/or meropenem in bloodstream infections due to low-level carbapenem-resistant Klebsiella pneumoniae,

Figure 1 Classical structure of zidebactam

Figure 2 Chemical structure of Zidebactam, a bicyclo-acyl hydrazide (C13 O=SO 3 H)

Table 2 Antimicrobial activity of cefepime-zidebactam 1:1, cefepime, and zidebactam tested against the organisms isolated from patients with bloodstream infections in US

Table 4 Activity of cefepime-zidebactam 1:1 and comparator antimicrobial agents

Figure 3 Cefepime-zidebactam MIC distribution for Enterobacteriaceae (n=1,809) and Pseudomonas aeruginosa (n=1,955) from patients hospitalized with bloodstream infections.