Ceftibuten-Avibactam Activity against β-Lactam-Resistant Enterobacteriaceae Clinical Isolates

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Introduction

- Resistance in enteric bacteria is often driven by β-lactamases, including non-class B carbapenemases.
- Avibactam (vibactam) is a β-lactamase inhibitor intended for combination with β-lactam and cephalosporin antibiotics.

Materials and Methods

- A total of 158 isolates were collected from 132 patients from 10 U.S. hospitals.
- The isolates were collected over a 3-month period.
- Susceptibility testing was performed using CLSI and EUCAST interpretive criteria.

Results

- Table 1: Activity of ceftibuten, ceftibuten-avibactam, and comparator antimicrobial agents against Enterobacteriaceae species complex, species complex (1), S. marcescens, K. pneumoniae, and Enterobacter cloacae species complex (1).

Conclusions

- Avibactam also displayed potent activity (MIC50/90, 0.12/1 mg/L) against Enterobacteriaceae
- β-lactamase gene- and pAmpC-positive Enterobacteriaceae.

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