

**Abstract**

**Introduction**

Carbapenem-resistant Enterobacteriaceae (CRE) are an increasing public health threat worldwide. CRE often harbor plasmid-mediated AmpC β-lactamases and extended-spectrum β-lactamases (ESBLs), which make CRE resistant to most antimicrobials. Ceftazidime-avibactam (CAZ-AVI) is a β-lactam-β-lactamase inhibitor combination approved by the FDA for treatment of infections caused by MDR and XDR P. aeruginosa. CAZ-AVI has also shown activity against inner ear pathogens such as Acinetobacter baumannii and S. maltophilia.

**Results**

1. **The 543 S. maltophilia isolates were predominantly from respiratory specimens (43.6%) and wounds (27.9%).**
2. **Carbapenem-resistant isolates included 406 (74.9%) CRE and 104 (18.9%) MDR (non-CRE) isolates.**
3. **Carbapenem-resistant isolates exhibited reduced activity against CRE (37.6%) (50/90)**
4. **The addition of avibactam to ceftazidime increased the proportion of CRE isolates susceptible from 82.4% to 86.3% (Tables 2 and 3).**
5. **Among non-cassette isolates, colistin (MIC90 12 µg/mL), and ertapenem (MIC90 2 µg/mL) were the most active compounds (Table 2).**
6. **The combination of CAZ-AVI and meropenem was associated with improved activity against nosocomial P. aeruginosa (MIC90 8 µg/mL), and clinical isolates with the highest activity against CRE.**

**Conclusions**

CAZ-AVI demonstrates potent in vitro activity against CRE, including MDR and XDR P. aeruginosa isolates. The combination of CAZ-AVI and meropenem was associated with improved activity against nosocomial P. aeruginosa (MIC90 8 µg/mL) and clinical isolates with the highest activity against CRE.