**In vitro Antimicrobial Activity of Sulbactam-Durlobactam (ETX2514) against 121 Recent Acinetobacter baumannii Isolates from Patients in India**

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**Background**

The incidence of infections caused by multi-resistant Acinetobacter baumannii is increasing at an alarming rate in Southeast Asia and other parts of the world. Sulbactam (SUL) is a potent β-lactamase inhibitor against A. baumannii; however, the prevalence of β-lactamases in this species has limited its therapeutic utility. ETX2514 (DUR) is a novel β-lactam/beta-lactamase inhibitor with broad spectrum activity against AmpC class A, C, and D β-lactamases. DUR resists SUL in 95% of clinical isolates against most A. baumannii. Against ≤0.06 μg/mL diverse clinical isolates from 2012-2017, addition of 4 mg/L durbactam reduced the MIC from >2 μg/mL to 0.06 μg/mL. SUL-durlobactam (SUL-DUR) was found to be superior to SUL against A. baumannii. The goal of this study was to determine the activity of SUL-DUR and compare the resistance profiles of SUL-DUR with sulbactam (SUL), carbapenams (MEM, IPM, and CFP), and ticarcillin (TIC) against A. baumannii isolated from hospitalized patients.

**Methods**

A total of 121 clinical A. baumannii isolates from multiple hospital settings and infection sources were collected between 2016 and 2019 and for its geographically diverse regions in India. Species identification was performed by MALDI-TOF. Susceptibility testing of these isolates to SUL-DUR (10 μg/mL) and carbapenems was determined by disk diffusion using CLSI method. The MIC for SUL-DUR and MIC for SUL was defined using the US CLSI penetration package.

**Results**

As shown in Table 1, resistance of this collection of isolates to marketed agents was extremely high. In contrast, based on preliminary breakpoint criteria, only 11.5% of isolates were resistant to SUL-DUR.

**Conclusions**

The in vitro activity of SUL-DUR was significantly more potent than comparator agents against multi-resistant A. baumannii isolated from diverse sites in India. These data support the continued development of SUL-DUR for the treatment of antibiotic-resistant infections caused by A. baumannii.

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**Abstract**

121 A. baumannii isolates were collected during 2016-2019 from Indian medical centers in 6 Indian cities. Isolates represent a variety of infection types including urinary tract, blood, or lung infections. Each isolate was tested by disk diffusion against SUL, SUL-durlobactam (SUL-DUR), carbapenams (MEM, IPM, and CFP), sulbactam (SUL), and ticarcillin (TIC). Susceptibility to sulbactam, carbapenams and ticarcillin was determined using CLSI breakpoint methods. Based on preliminary breakpoints, only 11.5% of isolates were resistant to SUL-DUR. MIC-based testing further supported the activity of SUL-DUR against A. baumannii.

**Study Design**

The in vitro activity of SUL-DUR was significantly more potent than comparator agents against multiresistant A. baumannii isolated from diverse sites in India. These data support the continued development of SUL-DUR for the treatment of antibiotic-resistant infections caused by A. baumannii.

**Conclusion**

The in vitro activity of SUL-DUR was significantly more potent than comparator agents against multi-resistant A. baumannii isolated from diverse sites in India. These data support the continued development of SUL-DUR for the treatment of antibiotic-resistant infections caused by A. baumannii.