479. Clinical outcomes in patients with extended-spectrum-beta-lactamase-producing (ESBL) *Enterobacteriaceae* bloodstream infections (ESB) treated with carbapenems (CP) and non-carbapenems (NC)

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Background. CP is considered the drug of choice for treating serious infections caused by ESBL producers. Recent data suggest that alternative agents like beta-lactam/beta-lactam inhibitor combinations with in vitro activity such as piperacillin-tazobactam (PT) may have efficacy in treating ESB.

Methods. This 4 year retrospective observational cohort study compared CP to NC for treatment of ESB in adult patients at a community hospital from January 2010 to December 2013. Data were collected from electronic medical records, microbiology, and pharmacy databases. Primary outcomes include clinical response (CR), clinical relapse (RL), and in-hospital mortality (MO). Secondary outcomes include hospital length of stay (HL), ICU length of stay (IL), number of days to reach clinical improvement (DC), and ICU readmission (IR). Other outcomes include adverse drug events (AE) and duration of therapy (DT). MICs were determined by automated susceptibility testing methods. Patients were excluded from analysis if < 18 years of age, treatment < 24 hours, and severe neutropenia (<500/mm^3).

Results. 47 patients with documented ESB were identified with 43 evaluable for analysis. 20 patients were treated with CP for DT 5.5 ± 3.9 days (d). 23 patients were treated with NC for DT 5.7 ± 7.4 d. 78.3% patients in NC group were treated with PT (n = 18) while 8.6% patients in NC group were treated with levofloxacin (n = 2). 88.9% isolates from PT group had MIC < 8 mg/L (n = 16) and 90% isolates from CP group had MIC < 1 mg/L (n = 18). Majority of ESB were due to *E. coli* (n = 30) followed by *K. pneumoniae* (n = 11). 4 patients had mixed polymicrobial bacteremia. Most common source was urinary tract (n = 25) followed by biliary/GI tract (n = 9). Mean APACHE II scores (17 ± 5.8 vs 20.3 ± 9.5), age (72.7 ± 11.7 vs 71.8 ± 14 years) and comorbidities were similar between CP and NC. Mean IL was shorter (1.4 ± 0.6 vs 4.6 ± 4.6 d), MO was lower (5% vs 26%), and CR was higher in CP group (85% vs 60.9%). However, mean HL, DC, and RL were similar between both groups (8.1 ± 5.9 vs 10.6 ± 16.3 d, 2.9 ± 1.9 vs 3.7 ± 4.7 d, and 5% vs 4.3%, respectively). Neither IR nor AE were observed in CP group but 2 of each occurred with NC group.

Conclusion. MO is lower and CR is higher with CP compared to NC for treating ESB. The role for PT as alternative therapy for ESB remains controversial and warrants further studies.

Disclosures. **All authors:** No reported disclosures.