mortality was greater for patients with higher MICS (U=20.5, p=0.06). The presence of an underlying source may be related to recurrence of BSI (p=0.075).

Table 1: Patient Characteristics

	Daptomycin + β-Lactam (n= 23)	Other therapy (n= 62)	*P value*
Age, mean (SD)	58 (13)	52 (14)	0.142
Race, n (%)			
Black	5 (22)	27 (44)	0.065
Caucasian	**11 (48)**	**13 (21)**	**0.014**
Hispanic	7 (30)	22 (35)	0.662
Transplant Recipient, n (%)	**14 (61)**	**14 (23)**	**< 0.001**
Pitt Bacteremia Score, mean (SD)	5 (4)	4 (4)	0.087
Charlson Comorbidity Index, mean (SD)	**5 (3)**	**4 (3)**	**0.013**
VRE colonization, n (%)	14 (88)[a]	17 (63)[a]	0.083
Beta-lactam, n (%)			
Ampicillin	8 (35)	N/A	N/A
Ampicillin-sulbactam	3 (13)		
Ceftriaxone	3 (13)		
Cefepime	2 (9)		
Ertapenem	5 (22)		
Ceftaroline	2 (9)		
Daptomycin dose <8mg/kg, n (%)	1 (4)	2 (8)[b]	0.601
Daptomycin dose considered appropriate, n (%)	18 (78)	19 (76)[b]	0.852
MIC of Daptomycin via E-test, n (%)			
<1 µg/mL	1 (4)	1 (4)[b]	0.951
1-2 µg/mL	10 (43)	10 (40)[b]	0.807
3 µg/mL	8 (35)	7 (28)[b]	0.612
4 µg/mL	2 (9)	2 (8)[b]	0.930
≥6 µg/mL	0 (0)	0 (0)[b]	N/A
Unknown	2 (9)	5 (20)[b]	0.267
Primary Source, n (%)			
Blood	**8 (35)**	**38 (61)**	**0.029**
Primary Bacteremia	**3 (13)**	**25 (40)**	**0.017**
CLABSI	5 (22)	13 (21)	0.938
Other	**15 (65)**	**24 (39)**	**0.029**
Pulmonary	3 (13)	3 (5)	0.189
Gastrointestinal	7 (30)	14 (23)	0.455
Hepatic/Biliary	**3 (13)**	**0 (0)**	**0.027**
Urinary	2 (9)	7 (11)	0.729
Polymicrobial, n (%)	10 (43)	24 (39)	0.690

[a]n= 16, n= 27; 16 patients had VRE screening in the daptomycin plus beta-lactam group; 27 patients had VRE screening in the other therapy group

[b]n= 25; 25 patients received daptomycin in the other group **without** a beta-lactam that has previously been cited in the literature as demonstrating in-vitro activity against VRE when combined with daptomycin

Table 2. Primary and Secondary Outcomes

	Daptomycin + in-vitro β-Lactam (n = 23)	Other (n = 62)	*P* value
Days to microbiological cure, mean (SD)	5 (4)	4 (5)	0.213
Microbiological cure ≤3 days, n (%)	13 (56.5)	42 (67)	0.336
Duration of therapy in days, mean (SD)	23 (15)	15 (15)	**0.001**
Length of stay in days, mean (SD)	109 (67)	68 (67)	**0.007**
Length of ICU stay in days mean (SD)	35 (54)	33 (53)	**0.002**
In-patient 30-day mortality, n (%)	6 (26)	17 (27)	0.902
Infection-related mortality, n (%)	2 (8.7)	6 (9.68)	0.999
Recurrence within 30 days, n (%)	10 (43)	5 (8)	**< 0.001**

Conclusion: We did not find a significant difference in time-to-microbiological clearance, although patients treated with DAP and a β-lactam had higher CCI and PBS. These results are limited by retrospective design, small sample size, and potential selection bias. Prospective randomized studies are needed to further validate these findings.

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1612. Evaluation of the Use of Ceftolozane/Tazobactam for the Treatment of ESBL-producing *Enterobacterales* Infections Using International Data from SPECTRA (Study of Prescribing Patterns and Effectiveness of Ceftolozane/Tazobactam Real World Analysis)

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SPECTRA Study Group

Session: P-71. Treatment of Antimicrobial Resistant Infections

Background. There is a paucity of data on outcomes of patients with severe ESBL-producing *Enterobacterales* infections treated with empiric or directed ceftolozane/tazobactam (C/T). This study looked at the treatment patterns and outcomes associated with C/T use in the treatment of ESBL-producing *Enterobacterales.*

Methods. Data were collected from an international cohort of 32 hospitals in 6 countries as part of SPECTRA, a retrospective multicenter database of C/T use globally, from 2016 – 2019. All adult patients with an ESBL positive *Enterobacterales* sterile site culture and treated with ≥ 48 hours of C/T were eligible. Outcomes assessed were clinical success, 30-day mortality from index event and readmission.

Results. There were 59 patients with 121 ESBL positive isolates. Blood and urine were the most common sites of infection at 19.8% each, followed by respiratory (18.2%). *E. coli* (50%) and *K. pneumoniae* (30%) were the most common pathogens. On average patients had 2 positive ESBL isolates; median 1; range 1-15. Most patients had the same infection site and ESBL pathogen, however 13 had multi-site ESBL pathogens identified and only 2 had polymicrobial ESBL pathogens. Septic shock was observed in 14 (24%) patients; 29 (49%) were in the ICU at the onset of infection. The most common comorbid conditions were immunocompromised hosts (37%) and cardiac disease (32%). 29% of patients were transplant recipients, and 28% had a CrCl < 50 ml/min. In most patients (71%), C/T was given as directed therapy (i.e., once culture results were available). C/T was given prior to culture results (i.e., as empiric therapy) in 17 (29%) patients, of which 77% had clinical success. C/T dose was 1.5 g in 49%. Only 2 of 10 patients with a respiratory source received the currently licensed 3 g dose. Overall, clinical success was observed in 36 (61%) patients. 30-day mortality was 12%. Readmissions occurred in 5%, of which 2 were infection related.

Conclusion. The role of newer non-carbapenem antibiotics in the treatment of severe ESBL infections is currently undefined. In a multinational patient database, C/T was found to be effective in severe infections caused by ESBL-producing *Enterobacterales*. Prospective studies are needed to further define the role of C/T in the setting of frequent drug-resistant Gram-negative pathogens.

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1613. Global 2018 Surveillance of Eravacycline Against Gram-negative Pathogens, Including Multi-drug Resistant Isolates

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Session: P-71. Treatment of Antimicrobial Resistant Infections

Background. Eravacycline (ERV) is a fully-synthetic, fluorocycline antibacterial approved by the FDA and EMA for treatment of complicated intra-abdominal infections (cIAI) in patients ≥18 years of age. The purpose of this study was to describe the *in vitro* activity of ERV against Gram-negative pathogens, including multi-drug resistant (MDR) isolates, collected in 2018.

Methods. Isolates were collected during 2018 from various body sites. Minimum inhibitory concentrations (MICs) were determined by CLSI broth microdilution. Antibiotic susceptibility was determined using the most updated CLSI breakpoints, except for ERV and tigecycline (TGC) where FDA breakpoints established in 2018 and 2005 respectively, were used. MDR was defined as resistance to ≥3 antibiotics from aztreonam, a carbapenem (meropenem or ertapenem [ETP]), cefepime/cefotaxime/ceftazidime/ceftriaxone (any one), gentamicin, levofloxacin, piperacillin-tazobactam TZP, tetracycline or TGC.

Results. Summary MIC data for ERV and select comparators are shown in the Table. ERV MIC_{90} for all-Enterobacteriaceae was 0.5 µg/ml and for MDR-Enterobacteriaceae was 1µg/ml. The susceptibilities for all-Enterobacteriaceae were 93%, 95%, 93% and 82% for ERV, TGC, ETP and TZP, respectively. ERV further demonstrated higher rates of susceptibility than ETP and TZP against MDR-Enterobateriaceae, 81% vs 71% vs 38%. ERV $MIC_{50/90}$ for carbapenem-resistant *Acinetobacter baumannii* (CRAB) were 4-fold lower than TGC.

Table

Organisms (N)	ERV $MIC_{50/90}$	TGC $MIC_{50/90}$	ETP $MIC_{50/90}$	TZP $MIC_{50/90}$
Enterobacteriaceae (3395)	0.25/0.5	0.5/2	0.015/0.5	2/128
C. freundii (463)	0.25/0.5	0.5/2	0.015/0.5	4/128
E. cloacae (509)	0.25/1	0.5/2	0.06/1	4/128
E. coli (515)	0.12/0.25	0.25/1	0.015/0.06	2/32
K. oxytoca (508)	0.25/0.25	0.25/2	0.015/0.03	2/>128
K. pneumoniae (535)	0.25/1	0.5/2	0.015/0.5	4/>128
MDR-Enterobacteriaceae (669)	0.25/1	0.5/2	0.25/8	64/>128
CRAB (496)	0.5/1	2/4	NT	>128/>128

Units in µg/mL; $MIC_{50/90}$ - minimum inhibitory concentration required to inhibit growth of 50/90% of isolates; NT - not tested

Conclusion. ERV *in vitro* activity was demonstrated and comparable susceptibility rates were observed for clinically important Gram-negative pathogens, including resistant isolates. Overall, ERV MIC_{90} values were 2- to 8- fold lower than TGC. this study further highlights the *in vitro* activity of ERV against Gram-negative pathogens identified in patients with cIAI.

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1614. Gwt1 Inhibitor, APX2104, Protects Against Invasive Aspergillosis in Neutropenic Mouse Model

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