

NCP-CRE (table). The 30-day mortality or length of hospital stay (LOS) did not differ between the two groups. Majority ($n = 12$) of CPE were identified to carry bla_{IMP} (MPM MIC, ≥ 2 mg/L), and two CPE were positive for $bla_{OXA-181}$ and $bla_{OXA-232}$ (MPM MIC, ≤ 1 mg/L). All NCP-CRE had IPM MIC of ≥ 2 mg/L; 7 (70%) had MPM of ≤ 1 mg/L. Resistance to amikacin (AMK) and levofloxacin (LFX) was noted in one and five CPE, respectively, whereas all NCP-CRE were sensitive, and nine bla_{IMP} and 1 $bla_{OXA-232}$ were transferable by conjugation.

Conclusion. CPE and NCP-CRE had different clinical characteristics. Non- β -lactam treatment options were more available for NCP-CRE than CPE. CPE and NCP-CRE might require different control strategies.

Table: Comparison of CPE and NCP-CRE, n (%)

	CPE ($n = 12$)	NCP-CRE ($n = 10$)	P -value
Age ^a	80 (74–93)	68 (63–73)	0.04
Male	5 (42)	8 (80)	0.1
Nursing home residence	4 (33)	0	0.1
Charlson Comorbidity Index ^a	3 (1–5)	2 (2–5)	0.92
Dependent functional status	9 (75)	3 (30)	0.08
Urinary catheter	9 (75)	2 (20)	0.03
NG tube	8 (67)	0	<0.01
Infection (not colonization)	3 (27)	3 (30)	>0.99
Polymicrobial isolation	7 (58)	9 (90)	0.16
Carbapenem exposure ^b	3 (25)	2 (20)	>0.99
Any antimicrobial exposure ^b	10 (83)	8 (80)	>0.99
30-day mortality	1 (10)	0	>0.99
LOS after isolation ^a , days	31 (10–59)	22 (8–45)	0.39

^aMedian (IQR) and ^b ≤ 1 month.

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1179. Incidence of Bacteremia and Bacteriuria With Antibiotic-Resistant *Enterobacteriaceae* After Transrectal Ultrasound-Guided Biopsy of the Prostate (TRUSBP)

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Background. Infection with *Escherichia coli* after TRUSBP is common, but other *Enterobacteriaceae* also occur. In the absence of microbiological data, prophylaxis with co-trimoxazole (TMP-SMX) or fluoroquinolones (FQ) is usually prescribed. We estimated the incidence of bacteremia and bacteriuria after TRUSBP with distinct species of *Enterobacteriaceae* and their rate of resistance to common antibiotics.

Methods. Using Veterans Healthcare Administration (VHA) databases, we identified patients undergoing TRUSBP between January 1, 2013 and December 31, 2017. We determined the incidence of *Enterobacteriaceae* isolated from urine and blood cultures obtained within 30 days of TRUSBP. Using microbiology data from VHA, we determined rates of resistance to TMP-SMX, FQ (ciprofloxacin as marker), ESC (ceftriaxone as marker), and carbapenems (Carb) (ertapenem as marker).

Results. Overall, 377 (0.3%) and 1,739 (1.4%) of 126,761 TRUSBPs were complicated by bacteremia or bacteriuria with *Enterobacteriaceae*, respectively. *E. coli* was predominant (91% of blood and 81% in urine). Rates of FQ resistance were low in *Klebsiella* and *Enterobacter* but exceeded 60% in *E. coli*. In general, TMP-SMX resistance exceeded 30%. Of note, 16.6% of blood and 11% of urine *Enterobacteriaceae* were resistant to ESC, while Carb-resistance was rare.

Conclusion. FQ and ESC-resistant *Enterobacteriaceae* are prevalent in bacteremia and bacteriuria after TRUSBP. Antibiotics used for prophylaxis and empirical treatment are likely to be ineffective. The prevention and management of TRUSBP-related infections should include microbiology-guided approaches.

	Total	ESC-Resistant	Carb-Resistant	FQ Resistant	TMP-SMX Resistant
<i>Enterobacteriaceae</i>					
Blood	377	61	16.4%	2	0.5%
Urine	1739	192	11.0%	20	1.2%
<i>Citrobacter</i>					
Blood	3	1	33.3%	0	0%
Urine	22	5	22.7%	2	9.1%
<i>Enterobacter</i>					
Blood	4	0	0%	0	0%
Urine	46	8	17.4%	2	4.3%
<i>Escherichia coli</i>					
Blood	344	57	16.6%	0	0.0%
Urine	1415	157	11.1%	2	0.1%
<i>Klebsiella</i>					
Blood	24	3	12.5%	1	4.2%
Urine	196	14	7.1%	6	3.1%
<i>Morganella</i>					
Blood	2	1	50%	0	0%
Urine	13	2	15.4%	5	38.5%
<i>Proteus</i>					
Blood	33	6	18.2%	3	9.1%
Urine	2	0	0%	1	50%
<i>Serratia</i>					
Blood	11	0	0%	0	0%
<i>Shigella</i>					
Blood	1	0	0%	1	100%

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1180. Addition of Chronic Kidney Disease Status to Pitt Bacteremia Score Improves Prediction of Mortality in Patients With Carbapenem-Resistant Enterobacteriaceae Infections

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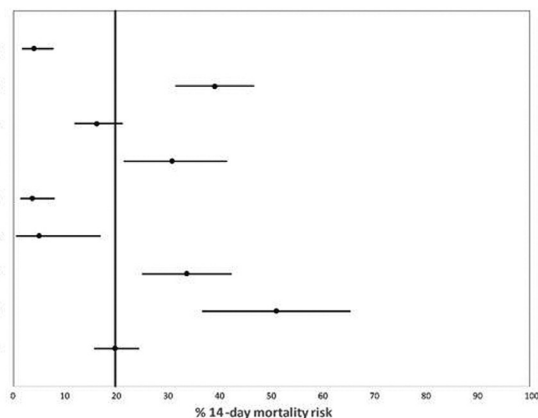
Background. Carbapenem-resistant Enterobacteriaceae (CRE) infections are associated with high mortality. The Pitt Bacteremia Score (PBS) was developed and validated to predict mortality in bloodstream infections (BSI). The first goal of this analysis is to evaluate whether PBS also predicts mortality in non-BSI infections. Second, we determine whether adding chronic kidney disease (CKD) as a parameter to PBS improves prediction of mortality.

Methods. The Consortium on resistance against carbapenems in *Klebsiella* and other Enterobacteriaceae (CRACKLE-1) is a prospective multicenter consortium of hospitals. Each patient with CRE infection was included once at the time of the last positive culture episode. Infections were distinguished from colonization using established definitions. Relative risk regression was used to evaluate the association of PBS ≥ 4 and CKD with 14-day all-cause hospital mortality.

Results. From December 2011 to June 2016, 364 unique patients were included with the following infections: bloodstream (34%), respiratory (20%), urinary (30%), and wound (16%). Median PBS was 3 (IQR: 2–4); 45% of patients had PBS ≥ 4 . CKD was present in 31% of patients with PBS ≥ 4 and 20% of patients with PBS < 4 . All-cause mortality within 14 days of the last positive culture episode was 20%. In multivariable analysis, PBS ≥ 4 was strongly associated with mortality in patients with bacteremia (PBS ≥ 4 adjusted RR = 6.1, 95% CI 2.5–14.6, CKD aRR = 1.5, 95% CI 0.9–2.3) and in patients with other infections (PBS ≥ 4 aRR = 14.0, 95% CI 4.3–44.6, CKD aRR = 1.6, 95% CI 1.0–2.7). Adding CKD as a parameter to the PBS improved mortality prediction, specifically in patients with PBS ≥ 4 (figure).

Conclusion. As expected, PBS ≥ 4 was predictive of the 14-day risk of hospital mortality in this cohort of CRE bacteremic patients. In patients with other CRE infections, PBS ≥ 4 was also predictive of mortality. In this cohort, adding CKD to the PBS improved prediction of mortality patients with PBS ≥ 4 .

Figure: Risks and 95% confidence intervals for 14-day all-cause hospital mortality, by Pitt bacteremia score and chronic kidney disease (CKD) status.



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