

Results. 11 consecutive patients with MSSA bacteremia (6 confirmed endocarditis) refractory to standard CZ or NAF rapidly cleared with CZ+ETP. 9 patients had daily positive blood cultures, and 8 cleared in ≤ 24 hr, including those with ≥ 2 cm vegetations. All 11 survived hospitalization. In MHB, 3/6 MSSA exhibited a CZ inoculum effect (CZ MIC $>3 \log_{10}$ vs. 10^3 CFU/mL), but only 1 showed a significant CZ inoculum effect in RPMI. CZ+ETP was significantly more efficacious than CZ in a rat model of MSSA endocarditis utilizing a strain displaying a CZ inoculum effect, despite only modest benefit observed *in vitro* for 6 MSSA isolates.

Conclusion. CZ+ETP combination therapy yielded profound clinical success in severe MSSA infections with high bacterial densities, as demonstrated by rapid bacteremia clearance. Enhanced efficacy was also observed in a rat endocarditis model. The anti-staphylococcal activity of CZ+ETP *in vivo* exceeded that observed *in vitro*, consistent with our prior observations of host innate immune cooperativity with the regimen. CZ+ETP warrants further study for the treatment of refractory MSSA bacteremia and endocarditis.

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218. Evaluation of Clinical Outcomes with Shorter Vs. Longer Duration of Treatment for Common Inpatient Bacterial Infections Associated with Bacteremia

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Background. Pneumonia (PNA), urinary tract infection (UTI), and acute bacterial skin and skin structure infection (ABSSSI) are the most common infections treated in the inpatient setting and often are associated with bacteremia. Though short courses of treatment are advocated for these infections in general, no established guidelines exist for cases involving bacteremia. We evaluated the clinical outcomes of patients receiving short (5–9 days) vs. long (10–15 days) duration of antibiotic treatment.

Methods. A retrospective study was conducted at 3 area hospitals comprising a university-based tertiary center, a public safety net hospital, and a Veterans' Affairs hospital. We included hospitalized adult patients with transient bacteremia associated with uncomplicated cases of PNA, UTI, or ABSSSI. The primary outcome consisted of a composite of rehospitalization or resumption of antibiotic treatment attributed to the original infection or death due to any cause within 30 days of the antibiotic start date. Secondary outcomes included the individual composite components, Clostridioides difficile infection, and antibiotic-related adverse effects leading to change in antibiotic therapy. A propensity score weighted logistic regression model was used to mitigate factors which could bias a patient toward receiving a shorter or longer treatment duration.

Results. Of 411 patients included in the study, 123 (29.9%) received a short duration of therapy and 288 (70.1%) received a long duration of therapy. The median duration of treatment was 8 days in the short group and 13 days in the long group. In the propensity-weighted analysis, the probability of meeting the composite primary outcome was not statistically different between the short and long groups (Table 1). However, receiving a short course was associated with a higher probability of restarting antibiotics and Clostridioides difficile infection.

Conclusion. Shorter vs. longer courses of antibiotic treatment for bacteremia associated with PNA, UTI, and ABSSSI were not significantly different in a composite of readmission, restart of antibiotics, and mortality; however, further study is needed to evaluate the safety and effectiveness of short-course therapy.

Table 1

	Long course (n=288)		Short course (n=123)		Odds ratio	P-value
	Frequency, n (%)	Predicted probability	Frequency, n (%)	Predicted probability		
Composite primary outcome	35 (12.2)	11.1%	15 (12.2)	15.9%	1.51	0.2220
Secondary outcomes						
Rehospitalization attributable to original infection	13 (4.5)	3.9%	2 (1.6)	2.5%	0.64	0.7120
Restarted antibiotics for original infection	28 (9.7)	8.8%	15 (12.2)	15.9%	1.97	0.0030
All-cause mortality	6 (2.1)	2.1%	0	0.0%		
C. difficile infection	4 (1.4)	1.1%	5 (4.1)	4.5%	4.02	0.0000
Antibiotic change due to adverse effect	4 (1.4)	1.4%	0	0.0%		

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219. Is the modified quick SOFA scale superior to quick SOFA in patients with diagnosed septic shock?

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Background. In this study it was aimed to compare the effects of qSOFA (Quick Sequential Organ Failure Assessment) score with modified qSOFA score (PLoS One. 2018 Sep 26;13(9):e0204608) for predicting one month survival in patients with diagnosed septic shock (SS) in a tertiary-care educational university hospital in a developing country.

Methods. Modified qSOFA was created by adding age factor (>50 years=1 point) to patients with qSOFA scale 1 or 2 or 3 who had SS (sepsis+hypotension+adrenergic agent) and consulted by Infectious Diseases consultants between December 2013–December 2018. Arterial lactate level of >2 mmol/L criterion was added as an including criteria for SS according to 3rd International Sepsis and Septic Shock Consensus Statement after 23rd February 2016. Statistical analysis was performed via Chi-square test and a p-value <0.05 was considered significant.

Results. The number of patients with qSOFA score of 1 or 2 or 3 from 527 patients are in Table1 [some of the cases were diagnosed as septic shock according to elder definition (without lactate criterion) and there was a subgroup with qSOFA score 1]. Among the >50 -year aged group, the 30-day survival rate was lower in patients with qSOFA3 vs. qSOFA 2 vs. qSOFA 1 (Table1, 3x2 Chi Square test, $P = 0.0057$). Among the <50 years group, the qSOFA one month survival rate was lower in patients with qSOFA 3 vs. qSOFA 2 vs. qSOFA 1 (Table, 3x2 Chi Square Test, $P = 0.0052$). According to modified qSOFA, there was a significant difference for one month survival among SS cases with scores of 1, 2, 3 and 4 (12/21 57% vs. 50/126 40% vs. 78/269 29% vs. 22/111 20%, 4x2 Chi-square test, $P = 0.0003$). On the other hand, there was no significant difference in terms of one month survival when we performed subgroup analysis in qSOFA score 1, 2, or 3 subgroups, as ≤ 50 years vs. >50 years (table, Chi-square test, 12/21 vs. 39/97 $P = 0.224$, 11/29 vs. 75/244 $P = 0.526$, 3/25 vs. 22/111 $P = 0.572$).

Conclusion. In terms of survival at one month, there was a significant difference between qSOFA score 1, 2, 3 and 4 subgroups. In patients with qSOFA score of 1 or 2 or 3, being under 50 years did not have a significant effect on one-month survival. Modified qSOFA may be beneficial to foresee the probable mortality but these findings need to be validated in larger cohorts

Table.1 Findings

	A (qSOFA 1+ ≤ 50 years)	B (qSOFA 1+ >50 years)	C (qSOFA 2+ ≤ 50 years)	D (qSOFA 2+ >50 years)	E (qSOFA 3+ c)	F (qSOFA 3+ >50 years)
Number of patients	21	97	29	244	25	111
Mean age (min-max)	36.7 (20-50)	67.7 (51-92)	40.1 (23-50)	70.7 (51-117)	40.1 (21-50)	71.6 (51-94)
One month survival	12 (57.1%)	39 (40.2%)	11 (37.9%)	75 (30.7%)	3 (12%)	22 (19.8%)

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220. Characteristics and Outcomes of Veterans with Invasive Group B Streptococcal Infection Vary with the Type of Syndrome

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Background. Surveillance from the US Center for Disease Control and Prevention (CDC) has detected an increase in the prevalence of invasive Group B streptococcus (GBS) infections between 2008 and 2016 among non-pregnant adults. Here, we use data from the US Veterans Health Administration (VHA) to assess the underlying clinical characteristics and outcomes associated with specific types of invasive GBS infection among veterans.

Methods. We used the VA Corporate Data Warehouse to identify patients with invasive GBS infection diagnosed between 2008–2017 using CDC's surveillance definitions. Data on the microbiological source of infection (e.g., GBS in cultures from blood, bone or sterile fluids) and associated International Classification of Disease (ICD) codes were used to classify the type of invasive infection. We determined associated co-morbid conditions and 30-day all-cause mortality for incident cases.

Results. Between 2008 and 2017, there were 4780 incident cases of invasive GBS infection in veterans with a mean age of 66.6 years (± 11.7) and 30-day all-cause mortality of 8%. The most common syndrome was osteomyelitis (23%, $N = 1078$) with 30-day mortality of 1%. Other common infections, such as bacteremia (20%; $N = 972$), skin and soft-tissue infections (18%, 853), and pneumonia (14%, $N = 664$), had higher mortality (13%, 4% and 17%, respectively; Figure). In patients with GBS peritonitis, present in 3% ($N = 138$) incidence cases, 46% had chronic liver disease with a 30-day mortality of 28%. Diabetes mellitus (DM) occurred in 66% of patients with any invasive GBS infection and in 86% of patients with GBS osteomyelitis. Chronic heart, kidney, or lung disease affected $>25\%$ of patients (table).