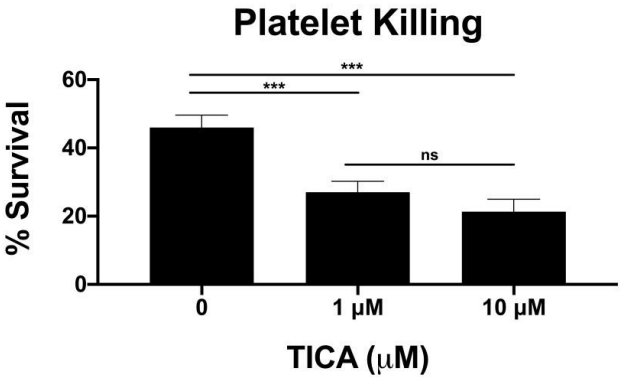
Figure 3



Conclusion: In a complex case of aortic plaque rupture with septic thrombus, multiple septic emboli, and refractory MSSA bacteremia, addition of TICA to antimicrobial therapy yielded unanticipated immediate clinical and microbiological success. The profound therapeutic effect of TICA *in vivo* was corroborated by the enhanced staphylocidal activity of human platelets *in vitro* in the presence of physiological concentrations of the antiplatelet agent. TICA warrants further study as adjunctive treatment of refractory SA bacteremia due to a primary endovascular focus when thrombocytopenia is present.

Disclosures: **Victor Nizet, MD**, **Centauri Therapeutics** (Advisor or Review Panel member)**Cidara Therapeutics** (Advisor or Review Panel member)**InhibRx** (Advisor or Review Panel member)**Roche Pharmaceutical** (Advisor or Review Panel member)

256. *Serratia Marcescens* Bacteremia and Endocarditis: A Treatment Assessment from an Academic Medical Center

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Session: P-9. Bacteremia

Background: Serratia Marcescens (SM) is often an opportunist that has been associated as a cause of healthcare-associated infection and in some people who inject drugs (PWID). Decisions about the treatment of SM infections are difficult given the small clinical studies available and concerns for multidrug resistance. SM has the ability to produce inducible AmpC b-lactamase and may acquire extended-spectrum b-lactamase (ESBL). Evidence-based guidance is lacking in terms of identifying preferred antimicrobial therapy of SM bacteremia and endocarditis. Compared to other reports, our hospital has one of the largest SM data sets to compare.

Methods: This observation study included adult patients admitted to our hospital (2016–2019) with SM bloodstream infections, including endocarditis. Patients were excluded from the analysis, if they had a concomitant infection with another gram-negative organism. Our evaluation was designed to: compare outcomes associated with different antibiotic regimens, evaluate how care differed in PWID patients versus others, and identify factors associated with obtaining infectious diseases expert consultations (ID Consult).

Results: Forty-three patients met study inclusion/exclusion. Twenty-eight patients (65.1%) had ID Consults. Twenty-four (55.8%) were PWID. Endocarditis was diagnosed in 30.2% of patients. The most common regimen was cefepime +/- aminoglycoside, followed by a carbapenem +/- aminoglycoside. Combination therapy was only recommended during ID Consult. Piperacillin-tazobactam was used in 11.6% of patients. No regimen displayed an efficacy or safety advantage over another. Most patients (90.7%) cleared their blood stream within 48 hours of antibiotic start. Phenotypic susceptibility testing did not identify either ESBL or AmpC production in any of the isolates, including recurrences. Multi-drug resistance was not appreciated. Significant factors associated with obtaining ID Consult were: PWID (p=0.004), endocarditis (p=0.0002), sepsis (p=0.022), surgical intervention (p=0.003).

Conclusion: We could not identify an advantage with any particular antibiotic treatment regimen in this study. Induction of AmpC or selection of ESBL organisms was not displayed by any of the organisms.

Disclosures: **All Authors**: No reported disclosures

257. *Staphylococcus aureus* Bacteremia: Does Intravenous Drug Use Impact Quality of Care and Clinical Outcomes?

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Session: P-9. Bacteremia

Background: Individuals with intravenous drug use (IDU) have higher risk for *Staphylococcus aureus* bacteremia (SAB) and increased management complexity. The goal of this study was to compare differences in SAB characteristics, adherence to standard of care metrics, and clinical outcomes in those with and without IDU.

Methods: A retrospective chart review was conducted on cases of SAB between January 1, 2016 and December 31, 2017 at a 500-bed teaching hospital. Inclusion criteria was age > 18 years and ≥ one blood culture positive for *S. aureus*. Patients were excluded if they transferred hospitals, had care withdrawn or died within 48 hours of diagnosis or had a ventricular assist device infection. Records were reviewed for substance use, SAB characteristics, standards of care, and outcomes. Data were analyzed using SPSS software. The study was approved by the Institutional Review Board.

Results: In 248 patients with SAB, 28.2% had documented IDU. Median age was 37 (IDU) and 57 (non-IDU). In the IDU group, 75.7% had the formal diagnosis of opioid use disorder and 78.9% of stimulant use disorder. IDU was associated with hepatitis C and houselessness while non-IDU was associated with diabetes, hemodialysis, and cancer. Those with IDU had higher rates of MRSA, endocarditis, and spinal infections, but did not have higher rates of polymicrobial infections or venous thrombosis. There was no difference in appropriate repeat blood cultures, antibiotic management, and ID consultation. Length of stay and against medical advice (AMA) discharges were higher in those with IDU. There was no difference in 90-day recurrence or readmission, but 90-day mortality was higher in the non-IDU group.

Table 1. Patient Demographics

	Total (n=248) N (%)	**IDU** (n=70, 28.2%) N (%)	**Non-IDU** (n=178, 71.8%) N (%)	**P-value**
Age (median)	52 (IQR 36.3-64.0)	37 (IQR 29.8-50.0)	57 (IQR 44.8-67.3)	**<0.001**
Sex				
▪ **Male**	165 (66.5)	43 (61.4)	122 (68.5)	0.285
▪ **Female**	83 (33.5)	27 (38.6)	56 (31.5)	
Race				
▪ **White**	213 (85.9)	61 (87.1)	152 (85.4)	0.517
▪ **Non-white**	35 (14.1)	9 (12.9)	26 (14.6)	
Comorbidities				
▪ **Hepatitis C** [a]	43/179 (24.0)	34/64 (53.1)	9/115 (7.8)	**<0.001**
▪ **HIV** [a]	8/180 (4.4)	4/64 (6.3)	4/116 (3.4)	0.383
▪ **Diabetes**	63 (25.4)	7 (10.0)	56 (31.5)	**<0.001**
▪ **Hemodialysis**	16 (6.5)	0 (0.0)	16 (9.0)	**0.010**
▪ **Malignancy**	42 (16.9)	1 (1.4)	41 (23.0)	**<0.001**
Houselessness	36 (14.5)	29 (41.4)	7 (3.9)	**<0.001**
IDU Characteristics				
▪ **Heroin use** [a]		57/68 (83.8)		
▪ **Opioid use disorder** [b]		53/64 (75.7)		
▪ **Methamphetamine use**		59 (84.3)		
▪ **Stimulant use disorder** [b]		45/57 (78.9)		
▪ **Alcohol use disorder**		15 (21.4)		
▪ **Polysubstance use**		50 (71.4)		
▪ **IMPACT consult**		30 (42.9)	28 (15.7)	

IDU= Intravenous Drug Use/ HIV= Human Immunodeficiency Virus/ IMPACT= Improving Addiction Care Team

[a] Denominators differ from total cohort due to variable not being clearly identified as present or absent based on definitions established for chart review

[b] Denominators differ from total cohort due to inability to categorize nature of formal substance use disorder diagnosis based on definitions established for chart review