using serological test. The prevalence of bacteremia/fungemia was reported in 11.8%, 9.4%, 8.7%, 9.2%, and 8.3% of cases and pulmonary infections were reported in 24.6%, 16.9%, 13.9%, 12.9%, and 10.3% of cases in the study periods A, B, C, D, and E, respectively. The incidence of Gram-negative bacteremia was significantly lower in period E compared with the periods A, B, and C (2.0% vs. 4.9%, 3.7%, and 3.4%, respectively).

Conclusion. The prevalence of Gram-positive bacteremia and pulmonary aspergillosis was higher in period E than in the periods A–D. This trend was possibly due to the wide use of fluoroquinolone prophylaxis in neutropenic patients and high performance of the serological test for aspergillosis. Sufficient monitoring for Gram-positive bacterial infection and mold infection is therefore essential during RI chemotherapy for AML.

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1019. Treatment Outcomes for *Enterococcus faecium* Bacteremia in Solid-Organ Transplant Patients: Implications for Daptomycin

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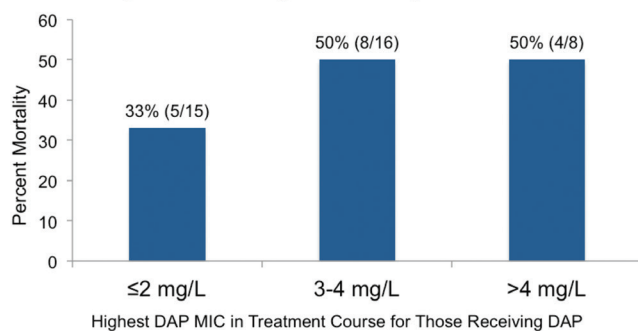*Friday, October 5, 2018: 12:30 PM*

Background. Optimal antimicrobial therapy for *Enterococcus faecium* (EFM) bacteremia in the solid-organ transplant (SOT) population is not well defined. Antimicrobial resistance, immunosuppression, and high mortality associated with EFM infections all pose serious threats. The purpose of this study was to describe the pharmacotherapy and outcomes of EFM bacteremia in SOT patients.

Methods. This was a single-center retrospective cohort of SOT patients with EFM bloodstream infection from 2013 to 2018. Susceptibility of ampicillin (AMP), vancomycin (VAN), linezolid (LZD), and daptomycin (DAP) against EFM were reported as MIC_{90} when available. The primary outcome, 30-day all-cause mortality, was assessed in bivariate analysis to identify potential risk factors. Secondary outcomes included inpatient mortality and development of DAP nonsusceptibility (DNS).

Results. Forty-four unique cases representing 40 patients were included in the analysis. The median age was 62.5 years and liver (65.9%), intestine (20.5%), and kidney (11.4%) were the most common organs transplanted. The MIC_{90} of VAN, DAP, and LZD of initial isolates collected were >32 mg/L, 4 mg/L, and 2 mg/L, respectively; all were AMP resistant. The median durations of hospitalization and intensive care stay were 29 days and 17.5 days, respectively. Most patients had indwelling central lines (81.8%) at the time of bacteremia; intra-abdominal abscesses/fluid collections were present in 45.5% of patients and 9.1% had endocarditis. The most common definitive antimicrobial regimens were DAP plus β-lactam (45.5%), DAP monotherapy (18.2%), and LZD 600 mg Q12H (25.0%). The mean initial and definitive DAP doses were 8.1 ± 1.6 and 8.9 ± 1.7 mg/kg actual body weight, respectively. Among subjects that received DAP, 21.9% developed DNS. Inpatient mortality was 39.5% and 30-day mortality was 27.3%. Mortality at 30-days was greater in patients with high-grade bacteremia (40.7 vs. 5.9%, $P = 0.01$) and receipt of DAP <10 mg/kg as the first active antibiotic (42.9 vs. 13.0%, $P = 0.03$).

Conclusion. Inadequate DAP dosing for EFM bacteremia may be associated with mortality in the SOT population. Larger, matched analyses are necessary to determine the impact of optimized pharmacodynamics.

Inpatient Mortality Stratified by DAP MIC

Figure: Bar chart of Percent Mortality. ≤2 mg/L: 33% (5/15); 3-4 mg/L: 50% (8/16); >4 mg/L: 50% (4/8). X-axis: Highest DAP MIC in Treatment Course for Those Receiving DAP.

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1020. Injection Drug Use-Associated *Staphylococcus aureus* Bacteremia in a Large Urban Hospital in Atlanta, Georgia

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Background. Infectious complications of injection drug use (IDU) have increased with the expanding opioid epidemic in the southeast. We assessed the incidence, clinical presentation, and treatment outcomes of IDU-associated *Staphylococcus aureus* (SA) bacteremia (SAB).

Methods. We created a retrospective cohort of all adults with community acquired (CA) SAB over 5 years presenting to Grady Memorial Hospital, a 1,000-bed urban county hospital in Atlanta, GA. Charts were reviewed by infectious diseases physicians to obtain clinical and laboratory characteristics, including substance use disorder (SUD), and determine if SAB was IDU-associated. The study period was divided into three periods (P1 = March 2012–January 2014, P2 = January 2014–December 2015, P3 = December 2015–November 2017) to evaluate changes in the incidence of IDU-SAB over time using Poisson regression.

Results. Among 321 patients with a first episode of CA-SAB, 24 (7%) were IDU-SAB. The number of IDU-SAB cases in each period increased (P1 = 4, P2 = 7, and P3 = 13 [$P = 0.07$ for trend]). The median age of IDU-SAB patients was 38 (IQR 31–57), 11 (46%) were black, and 15 (63%) had chronic hepatitis C virus infection. Heroin was the most common injected drug (92%) followed by cocaine (25%); multiple drugs were injected in 29%. All but two patients (92%) had a complication of SAB, most commonly endocarditis (50%) and septic pulmonary emboli (38%). The median hospitalization was 23 days (IQR 19.5–37.5) and 5 patients (12%) left the hospital against medical advice (AMA). Readmission for persistent or recurrent SA infection during the study period was common (42%), and three (13%) died ≤6 months from initial presentation, including two with prior discharge AMA. Half of the discharge summaries did not mention SUD as a hospital problem. Outpatient SUD treatment was recommended to eight (33%) patients and a recommendation of abstinence was the intervention for 12 (50%).

Conclusion. Increasing IDU-SAB was observed over 5 years in our urban Atlanta hospital, primarily due to heroin use. Most cases were associated with complications of SAB with a long length of stay and frequent readmission, but few patients received treatment or harm reduction interventions for their SUD. These data will raise awareness and direct resources to expanding evidence-based opioid use disorder treatment for patients with infectious complications of IDU.

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1021. Repeat Infective Endocarditis (rIE) in Persons Who Inject Drugs (PWID)

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Background. Injection drug use (IDU) is a major risk factor for infective endocarditis (IE). Rates of IE have recently increased in the US concurrent with the opioid crisis. Although IDU-related IE is well described, few data exist on repeat IE (rIE) in persons who inject drugs (PWID).

Methods. Patients ≥18 years old seen at Wake Forest Baptist Medical Center from 2004–2017 with an ICD-9 or -10 diagnosis of IE who met Duke criteria for IE and who self-reported IDU in the 3 months prior to admission were identified. The subset of PWID who developed rIE, defined as another episode of IE at least 10 weeks after the diagnosis of the first episode, was then reviewed.

Results. Of the 94 PWID with IE, 22 (23.4%) experienced rIE (19 re-infections, three relapses). All patients were Caucasian, 50% were male, and 68.2% lived in rural areas; the median age was 30. All 22 patients resumed IDU after their first episode of IE. The mean duration from completion of antibiotics for the prior IE episode to admission with rIE was 257.5 days; the episode of rIE occurred within 1 year in 17 patients (77.3%). On repeat admission, those with rIE had a Pitt bacteremia score of 3.0 and an APACHE II score of 13.1. Fever and bacteremia persisted for an average of 5.6 days and 2.6 days, respectively. *S. aureus* was the cause of rIE in 54.5% of patients and the tricuspid valve (TV) was involved in 77.3% of cases. Valve surgery occurred in 22.7% of patients. Mean length of stay was 25.3 days and mean duration of antibiotic therapy was 32.1 days. Seven patients (31.8%) died during the rIE hospitalization and another died within 12 months after discharge resulting in a 1-year mortality of 36.3%. Compared with their first episode of IE, rIE patients had higher admission Pitt bacteremia (3.0 vs. 1.5, $P = 0.07$) and APACHE II scores (13.1 vs. 9.5, $P = 0.18$), fewer *S. aureus* infections (54.5% vs. 95.4%, $P = 0.01$), similar TV involvement (77.3% vs. 72.7%, $P = 1$), and less frequent surgery (22.7% vs. 59.1%, $P = 0.06$).

Conclusion. rIE is common in PWID with most episodes occurring within 1 year of the initial episode. Reinfection is more frequent than relapse. The microbiology of rIE is more varied than first episode IE in PWID with *S. aureus* being less frequently isolated. Illness severity is high, hospitalizations are prolonged, and 1-year mortality is significant. More effective strategies for preventing rIE in PWID are needed.

Disclosures. **J. Peacock**, Pfizer: Shareholder, Owns common stock in Pfizer which was inherited and held in a trust.

1022. Rising Rates of Injection Drug Use Associated Infective Endocarditis in Virginia With Missed Opportunities for Injection Drug Use Disorder Treatment Referral: A Retrospective Cohort Study

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Background. Injection drug use disorder (IDD) is a growing public health threat in Virginia, although there is limited knowledge of related morbidity. The purpose of