1373. Racial Disparities in Clinical Characteristics and Outcomes for Methicillin Susceptible and Methicillin-Resistant Staphylococcus aureus Bacteremia
Michael C. Mohnasky, MBBS; Larry Park, PhD; Emily Eichenberger, MD; Michael M. Dagher, MD; Vance G. Fowler, Jr., MD, MHS; Felicia Ruffin, MSN; Britney N. Broadnax, n/a; 1Duke University Medical Center, Chapel Hill, North Carolina; 1Duke University Department of Medicine, Durham, North Carolina; 1Duke University, Durham, North Carolina

Session: P-77. Social Determinants of Health

Background. Bacterial bloodstream infections (BSI) are one of the most described syndromes in infectious diseases, but the presence of racial disparities in BSI is unclear. The purpose of this project was to determine if racial disparities exist in patients with S. aureus bacteremia (SAB).

Methods. Data was used from a prospective cohort of patients with SAB at Duke University Medical Center from 1995-2015. Patients were categorized as African American (AA) or White. Characteristics of interest included discharge disposition, metastatic infection, persistence of SAB, and in-hospital mortality stratified by methicillin-susceptible S. aureus (MSSA) and methicillin-resistant S. aureus (MRSA) infections. Statistical comparisons were performed for binary variables with Fisher’s Exact test and continuous variables with Kruskal-Wallis test.

Results. Among the 2396 patients with SAB, 1496 (62.4%) were White and 900 (37.6%) were AA. 1241 patients (51.8%) had MSSA bacteremia overall. Whites comprised 63.6% of MSSA and 61.2% of MRSA infections. AA were younger [MSSA: median, IQR = 53.0, 44.0-64.0 vs. 62.0, 50.0-71.0, p< 0.0001; MRSA: 58.0, 46.5-69.5 vs. 64.0, 52.0-74.0, p< 0.001] and more likely to be female (MSSA: 46.2% vs 38.2%, p= 0.007; MRSA: 53.1% vs 41.9%, p= 0.001). AA had higher rates of diabetes, hemodialysis, HIV infection for both MSSA and MRSA, but higher rates of injection drug use for MSSA only; Whites had higher rates of neoplasm, corticosteroid use, surgery for MSSA only; Whites had higher rates of transplant for MRSA only (Figures 1, 2). AA experienced increased rates of healthcare-associated infection (MSSA: 69.9% vs. 58.3%, p=0.0002; MRSA: 61.6% vs. 50.6%, p=0.001). Although Whites were younger than White patients (median age of 50 years, compared to 61 years, p< 0.001). AA had higher rates of diabetes, hemodialysis, HIV infection for both MSSA and MRSA, but higher rates of injection drug use for MSSA only; Whites had higher rates of neoplasm, corticosteroid use, surgery for MSSA only; Whites had higher rates of transplant for MRSA only (Figures 1, 2). AA experienced increased rates of healthcare-associated infection (MSSA: 69.9% vs. 58.3%, p=0.0002; MRSA: 61.6% vs. 50.6%, p=0.001). Although Whites were more likely to have in-hospital mortality for MRSA (24.6 vs. 19.2, p=0.0359), discharge disposition, metastatic infection, and persistence did not vary significantly by race.

Conclusion. Racial disparities exist in SAB, more so for patient characteristics than for outcomes. AA patients were younger, had a different set of comorbidities, and had more acute presentations. Although Whites had higher rates of in-hospital mortality, all other outcomes were similar.

Disclosures. Vance G. Fowler, Jr., MD, MHS, Achaghen (Consultant) Advanced Liquid Logistics (Grant/Research Support) Affinity (Consultant, Grant/Research Support) Affinnium (Consultant) Akage (Consultant) Allergan (Grant/Research Support) AmphiBiosciences (Consultant) Aridis (Consultant) Armata (Consultant) Basilea (Consultant, Grant/Research Support) Bayer (Consultant) CFH (Consultant) Corexia (Consultant, Other Financial or Material Support, Educational fees) Contrafect (Consultant, Grant/Research Support) Debiopharm (Consultant, Other Financial or Material Support, Educational fees) Destiny (Consultant) Durata (Consultant, Other Financial or Material Support, educational fees) Genentech (Consultant, Grant/Research Support) Green Cross (Other Financial or Material Support, Educational fees) In-tegrated Biotherapeutics (Consultant) Jansen (Consultant, Grant/Research Support) Karius (Grant/Research Support) Locus (Grant/Research Support) Medical Biosurfaces (Grant/Research Support) Medicines Co. (Consultant) MedImmune (Consultant, Grant/Research Support) Merck (Consultant, Grant/Research Support) Novadigm (Consultant) Novartis (Consultant, Grant/Research Support) Pfizer (Grant/Research Support) Regeneron (Consultant, Grant/Research Support) Sepsidis diagnostics (Other Financial or Material Support, Pending patent for host gene expression signature diagnostic for sepsis) Tetraphase (Consultant) Theravance (Consultant, Grant/Research Support, Other Financial or Material Support, Educational fees) Trius (Consultant) UpToDate (Other Financial or Material Support, Royalties) Valanbio (Consultant, Other Financial or Material Support, Stock options) xBiotech (Consultant)

1374. Clinical Outcomes of Sepsis According to Race at University of Minnesota Medical Center
Cameron Meyer-Mueller, BA1; Darlisha A. Williams, MPH1; Michael Westerhaus, MS; Radha Rajasingham, MD1; University of Minnesota, Minneapolis, Minnesota; 3University of Minnesota; Center for International Health; EqualHealth, Minneapolis, Minnesota

Session: P-77. Social Determinants of Health

Background. Sepsis is a life-threatening condition associated with significant in-hospital mortality. Sepsis disproportionately affects Black Americans and is a top-10 leading cause of death for Black people. Previous studies examining sepsis mortality rates by race have yielded inconsistent findings. This retrospective study evaluates the relationship between race and in-hospital sepsis-related mortality in adults at University of Minnesota Medical Center.

Methods. We reviewed all sepsis diagnoses in adults between January 1, 2020 and June 30, 2020 at the University of Minnesota Medical Center. Demographic information including age, sex, race, insurance status, primary language, expected and observed mortality score, discharge status, treatment information, and in-hospital mortality were also recorded. Self-reported race was categorized as African American, White, American Indian or Alaska Native, Asian, African, Hispanic or Latino, Hawaiian or other Pacific Islander, “some other race,” and “two or more races.” Statistical tests including χ2 test, Student t test, Kaplan-Meier estimator, and binary logistic regression were performed.

Results. We identified 780 cases of sepsis. Black patients were consistently younger than White patients (median age of 50 years, compared to 61 years, p< 0.001). Black patients were more likely to have comorbidities at baseline. However, logistic regression analyses, after controlling for language, race, primary payer, and expected mortality, showed no association between sepsis outcome and race.

Sepsis Cases at UMMC between January and June 2020 by Self-Reported Race

<table>
<thead>
<tr>
<th>Race</th>
<th>Cases (n=568)</th>
<th>Black (n=99)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Length of Stay (IQR) - days</td>
<td>7 (4 to 13)</td>
<td>8 (5 to 13)</td>
<td>0.6059</td>
</tr>
<tr>
<td>In-Hospital Deaths - number (%)</td>
<td>107 (19%)</td>
<td>8 (9%)</td>
<td>0.024</td>
</tr>
<tr>
<td>ICU Admission - number (%)</td>
<td>236 (46%)</td>
<td>23 (28%)</td>
<td>0.401</td>
</tr>
<tr>
<td>ICU Median LOS (IQR) - days</td>
<td>3.5 (2 to 9)</td>
<td>4 (2 to 12)</td>
<td>0.858</td>
</tr>
<tr>
<td>Left ANA - number (%)</td>
<td>7 (1%)</td>
<td>4 (4%)</td>
<td>0.003</td>
</tr>
<tr>
<td>Median O/E ratio (IQR)</td>
<td>1.37 (0.70 to 3.60)</td>
<td>3.20 (1.22 to 5.83)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Other includes the categories "Some other race" and "Two or more races."

Hospital Outcomes by Race

Patient Demographics by Race

Downloaded from https://academic.oup.com/ofid/article/8/Supplement_1/S773/6451028 by guest on 11 December 2021