“Clinical Manifestations and Perinatal Outcomes in non-Hispanic Blacks Who are Pregnant and Infected with SARS-CoV-2: A systematic review”

Yanique S. Campbell, PA-S, Mohsen Bazargan, PhD, Lucy Kibe, DrPH, MS, MHS, PA-C, Martha Bob-Manuel

Background

- Several recent studies revealed severe maternal morbidity as a result of COVID-19 and perinatal deaths.
- While data are available for pregnant patients with coronavirus disease, limited reports have analyzed non-Hispanic Black patients infected with SARS-CoV-2.
- Racial bias, low socioeconomic status, and comorbidities make Black pregnant women more susceptible to adverse outcomes associated with COVID-19.
- There are few recommendations for managing this vulnerable group during this ever evolving pandemic, and they should not be excluded in preparedness and response plans.
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Methods

- Google Scholar and PubMed databases for all case reports and series from February to November 2020.
- The researchers collected the following items from the original manuscripts: author’s name, study design, summary, the amount of study participants, the amount of study participants who met our eligibility criteria, and outcome measures.
- Maternal outcomes in non-Hispanic Black women that were assessed included incidence of maternal admission, rate of maternal infection, rate of maternal death, cesarean birth, and comorbid medical conditions.
- Neonatal outcomes that were assessed included incidence of infant infection--including neonatal positive COVID-19 test, preterm birth, still birth, and rate of fetal loss.
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Results

Table 1.

<table>
<thead>
<tr>
<th>Symptom at admission</th>
<th>Black, n = 134</th>
<th>White, n = 535</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyspnea</td>
<td>85/134</td>
<td>260/535</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Respiratory distress</td>
<td>69/134</td>
<td>393/535</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>SpO2 &lt;95%</td>
<td>56/134</td>
<td>137/535</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>ICU admission</td>
<td>27/134</td>
<td>104/535</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mechanical ventilation</td>
<td>20/134</td>
<td>39/535</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Death</td>
<td>17/134</td>
<td>38/535</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Data are from Black and White maternal COVID-19/SARS cases in Brazil (n = 669).

- Pregnant non-Hispanic Blacks have higher seropositive rates and present with worse conditions (increased dyspnea and decreased O2 saturation) that require ICU admission and mechanical ventilation.
- Prenatal and antenatal counseling can help prevent SARS-CoV2 infection and decrease complications related to COVID-19 in non-Hispanic Blacks.
- Pregnant non-Hispanic Blacks with comorbidities including obesity, diabetes, and hypertension are more likely to negative birth outcomes including preterm labor, fetal distress, and maternal deterioration.
- Pregnancy loss was common in non-Hispanic Blacks who were either symptomatic or asymptomatic --those who are asymptomatic require cautionary approach.
Non-Hispanic Black pregnant women have disproportionately higher rates of COVID-19 which is associated hospitalization, compared with those of pregnant women of other races and ethnicities.

Implementing early and continuous prenatal and postpartum care, increasing provider education, and increasing patient education may have a positive impact on maternal and fetal prognosis.

Discussion

- Non-Hispanic Black pregnant women have disproportionately higher rates of COVID-19 which is associated hospitalization, compared with those of pregnant women of other races and ethnicities.
- Implementing early and continuous prenatal and postpartum care, increasing provider education, and increasing patient education may have a positive impact on maternal and fetal prognosis.

References


