SARS-CoV-2 INFECTION AND PREGNANCY IN AFRICA: A 6-COUNTRY RETROSPECTIVE COHORT STUDY 00672

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Background

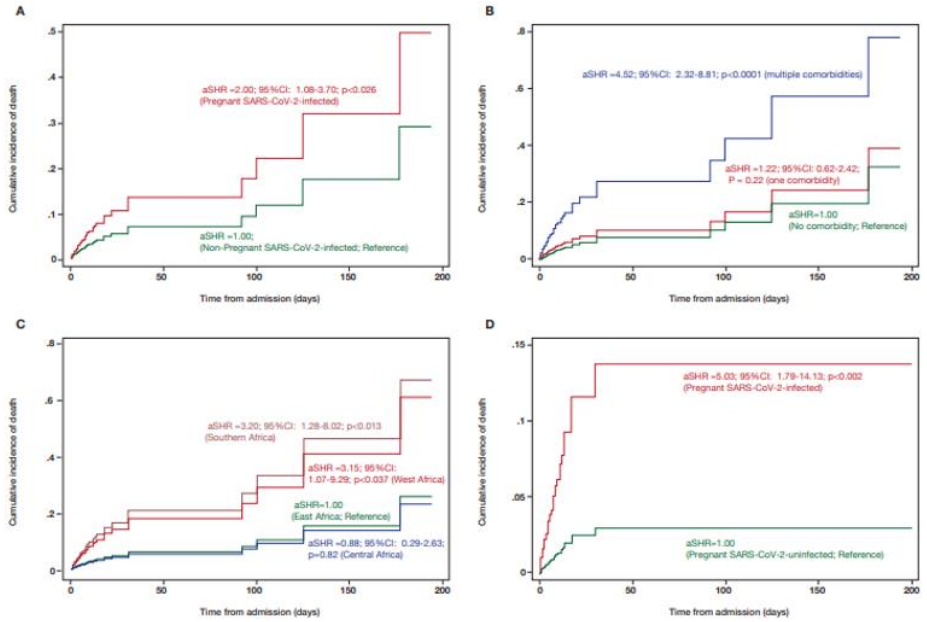
- There is a paucity of data on the effect of SARS-CoV-2 infection during pregnancy in sub-Saharan Africa (SSA), where co-morbidities such as HIV, tuberculosis (TB), and malaria are highly prevalent and access to/availability of COVID-19 prevention and treatment is inequitably low.

- The African Forum for Research and Education in Health (AFREhealth) COVID-19 Research Collaboration is a multi-disciplinary, pan-African consortium addressing maternal and child health issues relevant to SARS-CoV-2/COVID-19. We aimed to assess the bidirectional effect between pregnancy and SARS-CoV-2 infection.

Methods

We conducted a retrospective cohort study among women of childbearing age hospitalized at 22 health facilities in six SSA countries between 01 March 2020 and 31 March, 2021. We compared clinical outcomes among 1) pregnant and non-pregnant women with RT-PCR-confirmed SARS-CoV-2 infection and 2) pregnant women confirmed positive and negative for SARS-CoV-2 by RT-PCR. Exposures of interest were 1) pregnancy and 2) a positive SARS-CoV-2 RT-PCR test. The primary outcome for both analyses was intensive care unit (ICU) admission. Secondary outcomes included supplemental oxygen requirement, mechanical ventilation, adverse birth outcomes, and in-hospital mortality. We used log-binomial regression to estimate the bidirectional effect between pregnancy and SARS-CoV-2 infection. Factors associated with mortality were evaluated using competing risk proportional sub-distribution hazards models. .

Figure 1: Cumulative Incidence Functions for in-Hospital Mortality in SARS-CoV-2 Infected Women according to Pregnancy Status (Panel A), Number of Comorbidities (Panel B), Region (Panel C), and by SARS-CoV-2 Infection Status in Pregnant Women (Panel D)



Results

Our analyses included 1,315 hospitalized women: 510 pregnant women with SARS-CoV-2; 403 non-pregnant women with SARS-CoV-2, and 402 pregnant women without SARS-CoV-2 infection. Among women with SARS-CoV-2 infection, pregnancy was associated with increased risk for ICU admission (adjusted risk ratio [aRR]=2.38, 95%CI:1.42–4.01) and oxygen supplementation (aRR=1.86, 95%CI:1.44–2.42) and hazard of in-hospital death (adjusted sub-hazard ratio [aSHR]=2.00; 95%CI: 1.08–3.70) (**Figure 1, Panel A**). Among pregnant women, SARS-CoV-2 infection increased the risk of ICU admission (aRR=2.0, 95%CI:1.20–3.35), oxygen supplementation (aRR=1.57, 95%CI:1.17–2.11), and the hazard of in-hospital death (aSHR=5.03;95%CI:1.79–14.13) (**Figure 1, Panel D**). .

Conclusions

In this setting, among hospitalized women with SARS-CoV-2 infection, pregnancy increased the risk of ICU admission, oxygen supplementation, and death. Among hospitalized pregnant women, SARS-CoV-2 infection increased the risk of ICU admission, oxygen supplementation, and death. These data support international recommendations to prioritize COVID-19 vaccination among pregnant women.

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