

INTERNATIONAL CONGRESS ON GLOBAL HEALTHCARE

May 12, 2021 | Webinar

Maternal endothelial dysfunction in HIV-associated preeclampsia comorbid with Covid-19: A Review**Nitalia Naidoo***University of KwaZulu-Natal, Nelson R. Mandela School of Medicine, South Africa*

This review assesses markers of endothelial dysfunction (ED) associated with the maternal syndrome of preeclampsia (PE). We evaluate the role of antiretroviral therapy (ART) in human immunodeficiency virus (HIV)-infected preeclampsia women. Furthermore, we briefly discuss the potential of lopinavir/ritonavir (LPV/r), dolutegravir (DTG) and remdesivir (RDV) in drug repurposing and their safety in pregnancy complicated by severe acute respiratory syndrome coronavirus 2 (SARSCoV-2) infections. In HIV infection, the trans-activator of transcription protein, which has homology with vascular endothelial growth factor, impairs angiogenesis, leading to endothelial injury and possible PE development despite neutralization of their opposing immune states. Markers of ED show strong evidence supporting the adverse role of ART in PE development and mortality compared to treatment-naïve pregnancies. Coronavirus disease 2019 (COVID-19), caused by SARS-CoV-2 infection, exploits angiotensin-converting enzyme 2 (ACE 2) to induce ED and hypertension, thereby mimicking angiotensin II-mediated PE in severe cases of infection. Unregulated ACE 2 in pregnancy is a possible risk factor for SARS-CoV-2 infection and subsequent PE development. The potential effectiveness of LPV/r against COVID-19 is inconclusive; however, defective decasualization, along with elevated markers of ED, was observed. Therefore, the safety of these drugs in HIV-positive pregnancies complicated by COVID-19 requires attention. Despite the observed endothelial protective properties of DTG, there is a lack of evidence of its effects on pregnancy and COVID-19 therapeutics. Understanding RDV-ART interactions and the inclusion of pregnant women in antiviral drug repurposing trials is essential. This review provides a platform for further research on PE in the HIV-COVID-19 syndetic.

Biography

Miss Nitalia Naidoo placed second in her undergraduate studies earning her a CHS award. She joined the UKZN Neuroscience Group while completing her honours, cum laude. She completed her Master of Medical Science, summa cum laude at the age of 22, and is currently a first-year PhD candidate at the University of KwaZulu-Natal in South Africa. Her PhD research intends to facilitate advances in the understanding and treatment of the current COVID-19 pandemic. She is also a member of the Golden Key International Honor Society. Miss Naidoo published a review article in an international journal, Hypertension Research, focusing on maternal mortality, HIV and COVID-19.

nitaliatally@gmail.com