

# LETTER TO THE EDITOR



## COVID- 19 AND CARDIOVASCULAR DISEASE IN AFRICA: A CALL FOR CAUTIOUS HASTE



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The ongoing COVID-19 pandemic is ravaging the world in alarming proportions with its attendant health and economic consequences. As at December 15, 2020 there were over 73 million COVID -19 cases with over 1.6 million deaths globally.<sup>1</sup> Although mortality is said to be higher in those with co-morbidities such as cancer, diabetes and chronic respiratory disease compared to the general population, a recent American College of Cardiology bulletin shows that those with underlying cardiovascular disease have the highest case fatality rate of 10.5%.<sup>2</sup> With a twin burden of communicable and non-communicable diseases, the burden of cardiovascular disease in sub-Saharan Africa (SSA) was 22.9 million disability adjusted life years (DALYs) in 2017 and is projected to double by 2030.<sup>3</sup>

At the moment, cardiovascular disease is hypothesized to play a key role in COVID-19 for multiple reasons: (i) patients with cardiovascular risk factors and underlying cardiac disease have poorer outcomes (ii) patients without cardiac disease have developed cardiovascular complications from COVID-19 (iii) experimental drugs such as antimalarials and antivirals have known cardiovascular side effects and (iv) widespread concerns regarding the safety of key drugs like angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs) in relation to COVID-19.<sup>4</sup> There is thus a need to examine the

impact of COVID-19 on cardiovascular disease and generate scientific evidence to guide clinical practice.

Cardiovascular disease can result either as a direct consequence of the virus or indirectly from medications. Covid-19 is associated with a high inflammatory burden that can induce vascular inflammation, myocarditis, and cardiac arrhythmias.<sup>5</sup> In children, COVID-19 is reportedly associated with a rare heart condition called Kawasaki disease.<sup>6</sup> Medications such as Angiotensin Converting Enzyme (ACE) inhibitors which are essential in the treatment of hypertension and heart failure have been found to enhance viral entry<sup>7</sup> while chloroquine and hydroxychloroquine used for treatment can induce abnormal heart rhythms in rare cases.<sup>8</sup> It is thus necessary to review medications of cardiac patients in view of the ongoing pandemic.

Globally, patients with heart disease form the bulk of many hospital outpatient consultations and with current control measures in place, there has been a significant impact on cardiology practice. Clinic attendance has reduced with an attendant increase in consultations by phone. Cardiac patients who are vulnerable to this disease can become a potential sources of spread both to healthcare workers and other patients in overcrowded clinics typical of low resource settings like Subsaharan Africa (SSA). Procedures such as physical examination and echocardiography provide

prolonged contact and where personal protective equipment (PPE) is scarce; the risk of transmission is increased.

The American Society of Echocardiography (ASE) recently introduced guidelines for conducting safe echocardiography to reduce the risk of infection.<sup>9</sup> They recommend postponing elective procedures, using alternative imaging modalities, judicious use of personal protective equipment (PPE), pre-planning exams and thoroughly sterilizing equipment after each exam. It is important to state that emergencies such as acute heart failure and Myocardial Infarction can still occur during this pandemic requiring hospital admission. Breathing difficulties and cough which herald worsening of underlying cardiac disease can mimic COVID-19 in cardiac patients.. It is thus essential for patients to continue their regular medications in order to forestall complications.

In view of multiple ongoing trials of drugs and vaccines for COVID-19, there is a need to monitor for cardiovascular side effects as the long term complications of the disease is not yet known. The launch of CAPACITY-COVID - a data registry for European patients with heart disease and COVID-19 will provide evidence-based information on the role of cardiovascular disease in the setting of this pandemic.<sup>4</sup> We hereby recommend establishment of similar registries in sub-saharan Africa to identify any racial differences in presentation, complications and outcome.

The advent of COVID-19 has greatly impacted the practice of cardiology in sub-saharan Africa and changes in practice may be part of a post-COVID-19 era. The role of anxiety and stress on the individual cardiac patient during this pandemic is another area of concern that needs further investigation. Cardiovascular disease as a comorbidity results in the highest death rate in COVID-19 patients. There is therefore the need for cautious haste in the race to developing safe and effective therapies especially for patients with underlying cardiac disease.

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