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Pandemic has Played Havoc Beyond Imagination

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Commentary

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COVID-19 is a newly developed disease caused by a novel coronavirus, SARS-CoV2 that leads to adverse pulmonary pathological features [1]. COVID-19 is a pandemic with 2,72,36,916 confirmed cases worldwide and 8,91,031deaths, as on September 08th, 2020 [2]. CVDs remain to be one of the major causes of death globally. The CVD patients, suffering from COVID-19 could not attract proper attention. COVID-19 leads to severity in patients with CVDs as it interacts with the cardiovascular system on various levels, thereby, deteriorating the diseased conditions and thus, leading to myocardial injury and dysfunction [1]. As, it has been clearly revealed, that the spike protein of SARS-CoV-2 aids in the entry of the virus inside the cell via human ACE2 receptors present on the surface of epithelial cells of lung and other tissues [3], it can be hypothesized that the levels of ACE2 are associated with SARS-CoV-2 infection susceptibility. However, various studies have found that ACE inhibitor improves the clinical outcome of COVID-19 patients with hypertension and continuation of these medicines is beneficial [4,5]. It has also been documented that the cellular ACE2 levels are not same in all individuals and hence, polymorphisms of ACE2 may have effect on its varying levels [6].

In view of the role of ACE2 in the penetration of 2019-nCov, drugs such as angiotensin 2 receptor blockers (ARBs) that increase angiotensin 2 plasma levels could activate ACE2 and an adverse Covid-19 pandemic. ARBs are mainly prescribed for hypertension and it has been suggested that alternative drugs to ARBs should be used to treat hypertension during the Covid-19 pandemic [7].Taken into consideration that ACEI/ARB therapy is given to patients with ischemic heart disease, hypertension, and heart failure, however, special consideration should be provided to patients with COVID-19 using ACEI/ARB therapy [8]. Although this hypothesis should be considered and further investigated, at present the discontinuation of ARBs in hypertensive and heart failure patients is not supported by any evidence.

Further, The ACE gene polymorphism may also associate with ACE 2 levels and may lead to hypertension, especially, in Asian populations, It may also inloved in the susceptibility of SARS-CoV-2 infection and COVID-19 disease outcome. Another study suggested that the genotypes of ACE2 gene polymorphism in different populations may be linked with higher ACE2 expression level [9]. This ethnical/geographical variation of ACE 2 gene polymorphism may be one of the reasons of the variability in rate of infection and/or lethality worldwide based on the [10].

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In conclusion, besides the possible impact of Covid-19 on cardiology, the pandemic has created a perfect storm for the health organizations across the globe. Cardiologists must be aware of the organisational, emotional, and clinical consequences and should react accordingly. Further, the protocols for the supervision of COVID-19 patients with heart diseases and/or cardiovascular patients with COVID-19 should be established in detail.

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