



Editorial

Reflections on COVID-19 & cardiovascular care on World Heart Day

The world observes the World Heart Day annually on 29th September. This occasion, created by the World Heart Federation, aims to inform, educate and galvanize action against cardiovascular diseases globally¹. There is still much work to do, given that ischaemic heart disease and stroke claimed the lives of approximately 18.6 million individuals worldwide in 2019¹. This sobering toll was recorded before the emergence of the COVID-19 pandemic. To date, there have been more than 200 million cases of COVID-19 reported worldwide and more than four million reported deaths². India too, like many other nations, has unfortunately borne a great brunt of the COVID-19 pandemic.

Against the backdrop of a huge burden of cardiovascular diseases, the COVID-19 pandemic presents additional and unique challenges for the provision of cardiovascular diseases. The COVID-19 pandemic impacts the care of cardiovascular diseases in three major ways. First, COVID-19 has an interaction with cardiovascular diseases³. Second, COVID-19 adversely impacts cardiovascular service provision^{4,6}. Third, COVID-19 affects the training of the next generation of health professionals who can provide care to patients with cardiovascular diseases^{7,8}.

First, we will discuss the interactions between COVID-19 and cardiovascular diseases. COVID-19 can result in myocardial injury or myocarditis^{3,9}, as well as other thrombotic complications such as pulmonary embolism¹⁰. COVID-19 patients can present with a wide spectrum of manifestations, including cardiac complaints and arrhythmias³. As such, health providers should be more cognizant of the cardiovascular effects of COVID-19 on such patients and have a low index of suspicion for diagnosing, monitoring for and treating these conditions. COVID-19 can also exacerbate the manifestations of underlying cardiac conditions¹¹. Patients with cardiovascular risk factors and disease are at a greater risk of severe illness requiring

intensive care due to COVID-19³. The presentations can also confound the diagnosis of serious underlying cardiac conditions, such as heart failure or infective endocarditis due to the similar presentations³. As a preventive strategy, it is thus very important to continue to treat patients with cardiovascular diseases, such as hypertension, diabetes mellitus, ischaemic heart disease and heart failure. Furthermore, mRNA-based COVID-19 vaccinations have recently been identified to be associated with myocarditis¹², and this complicates the campaign of inoculating large populations of people to achieve herd immunity. The risk–benefit ratio suggests that vaccination against COVID-19 still far outweighs the deleterious effects of suffering from a serious COVID-19 infection. Long COVID, which is a term for the long-term effects of COVID-19 infection, is beginning to be understood¹³. There is still a lack of data on how long COVID affects the cardiovascular system. Against this developing backdrop, the interactions between acute and chronic COVID-19 infection, vaccination and the associated cardiovascular implications will need to be explored further in future research.

Second, the COVID-19 pandemic has impacted on cardiovascular service provision. The need to care for COVID-19 patients has shifted multiple care facilities' resources away from cardiovascular patients to COVID-19 patients¹⁴, thus affecting the timely diagnosis of cardiovascular conditions and also the follow-up of these patients. The need for heightened infection control measures has also made caring more challenging for cardiovascular patients. For instance, cardiac catheterization laboratories need to adopt more personal protective equipment use to guard against unexpected COVID-19 cases¹⁵. Established 'clean' and 'isolation' areas will need to be adhered to while taking care of patients for infection control measures¹⁵. The prolonged pandemic has also taken a toll on the mental health of healthcare providers^{5,6}. In a multinational study

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of 906 healthcare workers from five hospitals from India and Singapore caring for COVID-19 patients, a large proportion screened positive for anxiety, depression, stress and psychological distress⁶. There is an urgent need to ensure the positive psychological well-being of the healthcare workers in this pandemic, given that COVID-19 is likely going to be prolonged.

Third, the COVID-19 pandemic is going to affect the training of healthcare professions to take care of cardiovascular patients. As there is an increasing need to care for COVID-19 patients, it is inevitable when systems are strained that there is less attention being paid to the training and teaching. Due to various movement restriction measures, there might be a need for educators to consider adapting their teaching practices to provide training via other means, such as using online platforms to deliver content, or teleconferencing for clinical meetings⁸. Clinical examinations may be affected, and educators need to consider alternative modes of assessment while still ensuring a high standard of training⁸. Educators need to ensure that trainees' psychological wellbeing is taken care of during the pandemic as well and that there is enough personal protection equipment for them to feel safe⁸.

India is in a unique position during this pandemic. Indian healthcare professionals are recognized to be of a high medical standard and can partake in the most advanced of medical care. As we observe the proceedings of the World Heart Day, let us not forget our commitment to the care of patients with cardiovascular diseases and strive to do our best despite whatever the pandemic may bring.

Conflicts of Interest: None.

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