As cardiovascular health professionals, this guidance document has been brought out to help fellow physicians manage patients during the COVID-19 pandemic.

**INTRODUCTION**

CoVID-19 is a respiratory illness caused by a novel strain of coronavirus (SARS-CoV-2). This virus is a zoonotic infection and is closely related to the coronavirus causing SARS. As cardiovascular health professionals, it is pivotal to understand the current pathophysiological mechanisms and clinical complications in patients suspected or confirmed with COVID-19.

**PATHOGENESIS AND CLINICAL COMPLICATIONS**

1. CoV-2 invades alveolar epithelial cells, resulting in respiratory symptoms by respiratory symptoms followed by gastrointestinal symptoms; however, severe complications may arise if clinicians are not aware of the clinical presentation.

2. The safety concerns of ACE-I or ARB treatment in relation to COVID-19 do not support the cessation of these medications in patients with hypertension or heart failure.

3. Diabetic, renal, respiratory or other comorbid conditions for prioritised management of COVID-19 patients with cardiovascular complications and/or cardiac involvement. CoV-2 can induce a shared pro-inflammatory response in the myocardium and an increased inflammatory response in the cardiovascular system.

4. Current recommendations for ACS management would include – For NSTEMI/Unstable Angina: Conservative management until the confirmatory test results are available. For STEMI: Thrombolysis should be the reperfusion strategy of choice, like fibrinolytic therapy or angioplasty, depending on the availability of high dependency beds in a hospital. Patients with coronary heart disease. In a multicentre retrospective cohort study from China, elevated troponin levels were significantly higher in patients admitted to the ICU.

5. This could contribute to worsening of the clinical condition. Pro-coagulant effects of systemic inflammation may increase the likelihood of thrombosis. In addition, among the confirmed COVID-19 patients, the following conditions were significantly associated with higher in-hospital mortality: diabetes mellitus, chronic respiratory disorder, myocardial infarction were significantly higher in patients admitted to the ICU.

6. Acute coronary syndromes (ACS) admissions were associated with higher mortality in patients diagnosed with COVID-19.

7. Myocarditis or worsening of previously stable LV dysfunction leading to global LV dysfunction on Echocardiography. There has been an increase of patients with new onset atrial fibrillation and atrial tachycardia. In refractory shock, steroids and ECMO may be considered. Isolated case studies with prednisolone has shown some benefit. Malignant tachyarrhythmias - ventricular tachycardia or fibrillation and AV blocks indicate extensive myocardial involvement and indicate prognosis under or overdiagnosis.

8. Other cardiovascular complications include: Hypertension, myocardial infarction, and kidney. This could contribute to worsening of the clinical condition. Pro-coagulant effects of systemic inflammation may increase the likelihood of thrombosis. In addition, among the confirmed COVID-19 patients, the following conditions were significantly associated with higher in-hospital mortality: diabetes mellitus, chronic respiratory disorder, myocardial infarction were significantly higher in patients admitted to the ICU.

9. Acute coronary syndromes (ACS) admissions were associated with higher mortality in patients diagnosed with COVID-19.

10. Myocarditis or worsening of previously stable LV dysfunction leading to global LV dysfunction on Echocardiography. There has been an increase of patients with new onset atrial fibrillation and atrial tachycardia. In refractory shock, steroids and ECMO may be considered. Isolated case studies with prednisolone has shown some benefit. Malignant tachyarrhythmias - ventricular tachycardia or fibrillation and AV blocks indicate extensive myocardial involvement and indicate prognosis under or overdiagnosis.