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Guidance on Cardiac Implications of COVID-19 (ACC, 2020)

American College of Cardiology

This is a quick summary of the guidelines without analysis or commentary. For more information, go directly to the guidelines by clicking the link in the reference.

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In February 2020, the American College of Cardiology (ACC) released a clinical bulletin to address early cardiac implications of the current novel coronavirus epidemic, COVID-19 (coronavirus disease 2019).[1,2] The guidance is based on case reports as well as "provides information on the potential cardiac implications from analog viral respiratory pandemics and offers early clinical guidance given current COVID-19 uncertainty."

Because "viral infections such as influenza can destabilize and worsen cardiac conditions," it is likely that COVID-19 will also have an effect, with varying severity in individuals, particularly given indications that 40% of patients with COVID-19 have underlying cardiovascular or cerebrovascular disease.[1,2] These patients are at high risk of having complications and/or dying.

Acute Cardiac Complications of COVID-19

- COVID-19-related cardiac complications include arrhythmia and acute cardiac injury.
- Conditions that can precipitate cardiac complications include acute-onset heart failure, myocardial infarction, myocarditis, and cardiac arrest, as well as any illness that places a higher cardiometabolic demand on patients.
- COVID-19 cardiac complications appear in line with severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and influenza analogs.
- Cardiologists should prepare to aid other specialists in managing cardiac complications in patients with severe COVID-19.
- Cardiology and critical care teams should coordinate management of patients requiring extracorporeal circulatory support with veno-venous (V-V) versus veno-arterial (V-A) extracorporeal membrane oxygenation (ECMO).
- Obtain echocardiography in the setting of heart failure, arrhythmia, electrocardiographic (ECG) changes, or cardiomegaly.

ACC Guidance

- COVID-19 is a fast-moving epidemic with an uncertain clinical profile; providers should be prepared for guidance to shift as more information becomes available.
- COVID-19 is spread through droplets and can live for substantial periods outside the body; containment and prevention using standard public health and personal strategies for preventing the spread of communicable disease remains the priority.
- Make plans to quickly identify and isolate cardiovascular patients with COVID-19 symptoms from other patients, including in the ambulatory setting.
- Those with underlying cardiovascular disease (CVD) have a higher risk of contracting COVID-19 and have a worse prognosis. Advise these patients of the potential increased risk and encourage additional, reasonable precautions.
- It is important for patients with CVD to be up to date with vaccinations, including the pneumococcal vaccine, given the increased risk of secondary bacterial infection; it would also be prudent to receive influenza vaccination to prevent another source of fever which could be initially confused with coronavirus infection.
- Older adults are less likely to present with fever, thus close assessment for other symptoms such as cough or shortness of breath is warranted.
- In areas with active COVID-19 outbreaks, substituting telephone/telehealth visits for in-person routine visits for stable CVD patients may be reasonable.
- The emphasis for CVD patients in areas without widespread COVID-19 should remain on the threat from influenza, the importance of vaccination, and frequent handwashing, and continued adherence to all guideline-directed therapy

for underlying chronic conditions.

- It is reasonable to triage COVID-19 patients according to the presence of underlying cardiovascular, diabetic, respiratory, renal, oncologic, and other chronic diseases for prioritized treatment.
- Providers are cautioned that classic symptoms and presentation of acute myocardial infarction may be overshadowed in the context of coronavirus, resulting in underdiagnosis.
- Some experts have suggested that the rigorous use of guideline-directed, plaque-stabilizing agents could offer additional protection to patients with CVD during a widespread outbreak (statins, beta blockers, angiotensin-converting enzyme inhibitors, [ACEIs], acetylsalicylic acid [ASA]); however, such therapies should be tailored to individual patients.

Please see the Medscape Coronavirus Resource Center for more COVID-19-related information.

For more Clinical Practice Guidelines, please go to Guidelines.

References

1. Jeffrey S. ACC guidance on cardiac implications of coronavirus. *Medscape Medical News.* February 13, 2020. Available at: https://www.medscape.com/viewarticle/925244. Accessed March 23, 2020.
2. American College of Cardiology. ACC clinical bulletin: COVID-19 clinical guidance for the cardiovascular care team. Reviewed March 6, 2020. Available at: https://www.acc.org/~/media/665AFA1E710B4B3293138D14BE8D1213.pdf. Accessed March 23, 2020.

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