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Spotlight on Special Topics

OUTCOMES OF LIFE-THREATENING CARDIOVASCULAR COMPLICATIONS AND CORONAVIRUS DISEASE 19- A COHORT STUDY

Poster Contributions

Sunday, May 16, 2021, 9:45 a.m.-10:30 a.m.

Session Title: Spotlight on Special Topics: COVID 4

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Background: The clinical presentation of COVID-19 varies. It can range from being asymptomatic or having mild respiratory symptoms to severe pulmonary complications and potentially life-threatening cardiovascular arrhythmias. The aim of this study was to provide a focused overview of cardiovascular complications associated with COVID-19 and outcomes in those admitted to our Intensive Care Unit (ICU).

Methods: Retrospective cohort of COVID-19 positive patients admitted to the Anne Arundel Medical Center ICU between 03/2020 and 06/2020. We collected baseline characteristics, severity of illness scores, ICU resource utilization, and outcomes.

Results: A total of 120 patients that tested positive for COVID-19 required ICU admission; 21 had underlying cardiovascular disease including coronary artery disease, and cardiomyopathy with heart failure. Among the study patients, 27 (22.5%) had atrial fibrillation (AF); 20 were new onset AF (74%). 3 patients (2.5%) developed non-ST segment elevation myocardial infarction, 2 patients (1.66%) developed pericardial effusion with no cardiac tamponade physiology during the ICU stay. Eight patients (6.66%) required cardiopulmonary resuscitation (CPR); pulseless electrical activity was the initial rhythm in 7 (87.5%) and asystole in 1 (12.5%). The median age of the patients with cardiac complications was 70 (IQR 61-77) years, 20 (57.14%) were men, 34.28% identified themselves as African American, 28.57% were Caucasians, and the remaining declined to answer. ICU median length of stay (LOS) was 9 (5-15) days, and median hospital LOS was 16 (7-27) days. Median admission Sequential Organ Failure Assessment (SOFA) score was 9 (5-12) and max SOFA score was 13 (10-15). Thirty-five unique patients had complications. The overall hospital mortality was 35% (42/120) for patients with and without underlying CVD, whereas 35.71% (15/42) in those with underlying CVD. Mortality rate of those that had cardiac arrest was 71.42%.

Conclusion: The incidence of cardiovascular complications in this series of COVID-19 patients admitted to the ICU was 29.16%. Unless they required CPR, the overall hospital mortality was lower than expected based on their severity of illness.