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Spotlight on Special Topics

ATRIAL ARRHYTHMIAS ASSOCIATED WITH INCREASED MORBIDITY AND MORTALITY IN PATIENTS HOSPITALIZED WITH COVID-19

Poster Contributions

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Session Title: Spotlight on Special Topics: COVID 6

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Background: Coronavirus disease (COVID)-19 is a novel, highly contagious virus with a wide array of presentations. While mostly characterized by symptoms in the respiratory tract, cardiovascular disease and associated complications often accompany infections thereby increasing morbidity and mortality. Current literature has reported an increased rate of cardiac arrhythmias in patients hospitalized with COVID-19. This retrospective analysis sought to evaluate the impact of atrial arrhythmias on morbidity and mortality in patients hospitalized with COVID-19.

Methods: This inpatient cohort from the North Texas HCA registry included 5747 patients with a diagnosis of COVID-19 admitted between March 2020 and August 2020 of which 1522 were analyzed thus far. We evaluated clinical records to obtain demographic characteristics and medical comorbidities. Demographic characteristics included sex, age and race. Outcomes included myocardial infarction, heart failure, atrial arrhythmias, acute kidney injuries, ventricular tachycardia, ventricular fibrillation, cardiac arrest and mortality. We calculated rates of prior and in-hospital AF, atrial flutter, and SVTs and evaluated rates of inpatient outcomes and major adverse cardiovascular events.

Results: 1522 hospitalized patients (52.1% female; 42.9 % Caucasian, mean age 48 years) with COVID-19 were analyzed. Patients with a diagnosis of COVID-19 in addition to past or present diagnosis of AF, atrial flutter and/or SVT (N=192) had worse rates of myocardial injury (P=0.035), acute kidney injury (P=0.048), congestive heart failure (P=0.001), ventricular tachycardia (P=0.003), cardiac arrest (P=0.001) and increased mortality (P=0.001).

Conclusion: Recent literature has shown that COVID-19 infection may increase the susceptibility to atrial arrhythmias, especially in the acute phase. Our analysis shows the clinical impact atrial arrhythmias can have on these hospitalized patients. Tele monitoring devices may improve care by early detection and prompt treatment of atrial arrhythmias as these arrhythmias are associated with a significantly increased risk of morbidity and mortality.