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combined with colchicine in 4 cases, with no recurrent episodes. 13 patients required a permanent pacemaker for persistent conduction defect (52%) and one died of ventricular fibrillation without pacemaker

**Conclusion:** Advanced AVB could be a complication of COVID-19. The conduction disturbance was reversed by corticosteroids with or without colchicine in eleven of twenty five cases (44%) The resolution with corticosteroids of the advanced AVB in these patients could reflect the transient nature of the viral infection and the inflammatory response associated with it in some patients. 13 patients required a pacemaker(52%). Physicians should be aware of this complication.

## CE-541-02

### POST-COVID AND POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME

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**Background:** Persistence of symptoms beyond acute coronavirus disease 2019 (COVID-19) is termed post-acute sequelae of SARS-CoV-2 (PASC) and include neurological, pulmonary, cardiac, psychiatric, and functional impairment. Most common cardiac sequelae appear to be postural orthostatic tachycardia syndrome (POTS). The incidence, presentation and long-term outcomes of POTS as a post-COVID condition is unknown.

**Objective:** To study the presentation, management, and outcome of Post-COVID POTS.

**Methods:** We conducted a retrospective study of all patients who were diagnosed with POTS at Cardiology, Neurology, and Rehabilitation Post-COVID clinic after COVID-19 infection between March 1, 2020, and November 1, 2021, at the University of Texas Health San Antonio. We examined COVID history, POTS diagnosis, management, and outcomes of Post-COVID POTS patients.

**Results:** The cohort comprised of 40 patients who were diagnosed with Post-COVID POTS. Mean age was  $40.98 \pm 11$  years with a mean BMI of  $32.32 \pm 9.70$ . Females comprised of 97.5% of the patients. Symptoms began 4-6 weeks after COVID and included fatigue (75%), palpitations (70%), lightheadedness (47.5%), cognitive decline (50%), mental clouding (50%), dyspnea (50%), memory loss (47.5%), and syncope (2.5%). Patients were diagnosed with Post-COVID POTS an average of  $219.9 \pm 156.4$  days after the diagnosis of COVID-19. Tachycardia upon standing or activity occurred with a mean change in heart rate of  $42.48 \pm 29.37$  bpm. Along with increasing water intake, salt intake, rehabilitation, and lower body compression, initial management included beta blockers (30%), fludrocortisone (5%), and midodrine (5%). At 6 months, patients still had persistent symptoms with 65.52% of patients noting some improvement, 31.0% with stable symptoms, and 3.45% with worsening symptoms. Physical therapy and rehabilitation were reported as the most effective treatment in the mild improvement group. At 6 months disabling symptoms persisted in 100% of these high functioning women pre-COVID. No patient had full recovery.

**Conclusion:** Post-COVID POTS is a disabling diagnosis and symptoms persisted even after 6 months of onset. Although physical therapy and rehabilitation seem to have some effect, these patients who were functional pre-COVID are still disabled and none had full recovery.

## CE-541-03

### OCCURRENCE OF ATRIAL FIBRILLATION AFTER RECEIVING A SARS- COV-2 VACCINE: REPORT FROM CENTERS FOR DISEASE CONTROL AND PREVENTION VAERS DATABASE

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**Background:** The COVID-19 pandemic continues to be an ongoing health crisis affecting over 49 million patients in the US. Currently, 3 vaccines have been authorized for use by the US FDA for preventing COVID-19 infection. Although data are accumulating on rare reports of myocarditis, there is little data on atrial fibrillation (AF) after COVID-19 vaccination. In the initial randomized clinical trial of the Moderna vaccine, the incidence of AF was reported to be <0.1%, and balanced between the vaccine and placebo groups; but the cohort was relatively young (75% were < 65 years old).

**Objective:** We sought to assess the associated risk of AF with COVID-19 vaccination.

**Methods:** We analyzed data from Vaccine Adverse Event Reporting System (VAERS) database, which had categorized self-reported occurrence of AF along with major complications.

**Results:** Of the total 14,693 individuals who had received at least 1 dose of COVID-19 vaccine and had also reported at least 1 adverse event in VAERS, 23 (0.16%) participants had reported the occurrence of new-onset AF. Of these 23 individuals (mean age =  $76.6 \pm 15.7$  years; M/F = 14 [61%] / 9 [39%]), 10 (43.5%) had received the Moderna vaccine (mRNA-1273) and 13 (56.5%) had received the Pfizer-BioNTech vaccine. The timing of AF onset after the administration of vaccine dose ranged from 3 hours to 14 days. In 15 of the 23 patients, new-onset AF was the primary reason necessitating emergency room visit. Of these 23 individuals, one had a stroke, and another had a transient ischemic attack.

**Conclusion:** The temporal association of AF with COVID-19 vaccine administration suggest that there may indeed be a transient increase in AF post-vaccination, albeit at a seemingly low rate. This might reflect a transiently elevated proinflammatory state in conjunction with presence of an underlying electrical and structural substrate. The apparent infrequent nature of development of AF suggests that the vaccine should not be withheld because of concern about developing AF. On the other hand, it seems prudent to i) treat post-vaccine AF conservatively as a potentially reversible event (unless the AF persists late [ $> 1$  month] after vaccination), and ii) inform patients with a history of AF that the hyper-inflammatory state associated with COVID-19 vaccination (as can occur with any vaccine) might transiently trigger AF.

## CE-541-04

### CARDIAC ARRHYTHMIAS IN POST-ACUTE SEQUELAE OF SARS-COV-2 INFECTION ASSESSED BY AMBULATORY RHYTHM MONITORING

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