

Prevalence and Clinical Significance of Antiphospholipid Antibodies in Hospitalized Patients with COVID-19 Infection

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Introduction: The pathophysiology of coronavirus disease 2019 (COVID-19) may involve both arterial and venous thromboembolic events; however, current literature shows variance in incidence. Previous literature suggests that the presence of antiphospholipid antibodies (APA) is an important factor for thrombosis in COVID-19 patients. This single-institution retrospective study aims to find if the prevalence of APA in COVID-19 patients has any clinical significance.

Methods: Two cohorts were made based on APA status of the patients (APA positive & APA negative) and were statistically compared. The criteria for the APA positive group include patients with positive titers for lupus anticoagulant or abnormal APA antibodies. A Mann-Whitney U-test for continuous variables or a Fisher's exact test for categorical variables was used to compare prognostic outcomes and laboratory values for the two groups.

Results: No significant difference in demographics was found between the two groups. 39.3% of patients hospitalized with COVID-19 were APA+ and APA positive status is significantly higher in smokers. No statistically significant difference was found in six-month mortality between the two groups. It was statistically found that APA+ patients had a higher nadir of C-reactive protein lab values and a lower nadir of absolute lymphocyte count.

Conclusion: While some laboratory values differ between the two groups, prognostic outcomes of patients were not statistically different between the APA positive and APA negative patients. Currently

it is unknown if antiphospholipid antibodies have a role in the pathogenicity of COVID-19 and further studies are needed to determine their role in thrombotic events in these patients.