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## Prevention and Health Promotion

### THE ASSOCIATION OF ANTICOAGULATION BEFORE ADMISSION AND SURVIVAL OF PATIENTS WITH COVID-19

Poster Contributions  
Monday, May 17, 2021, 12:15 p.m.-1:00 p.m.

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Session Title: Prevention and Health Promotion: Population Science 3  
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**Background:** Severe COVID-19 is associated with systematic coagulopathy which might result in fatality. We aimed to investigate whether systematic anticoagulation before admission with COVID infection associated with patients' survival.

**Methods:** We reviewed medical records of 6,116 hospitalized patients with laboratory confirmed COVID-19 from the Mount Sinai Health System. Patients were stratified into two groups; patients with therapeutic anticoagulation before admission, or those without. Propensity score matched analysis was conducted to assess the association of anticoagulation before admission and in-hospital mortality. Multiple imputation for missing data was conducted.

**Results:** 412 patients (6.7%) received anticoagulation before admission. Patients with anticoagulation before admission were older ( $72.3 \pm 14.2$  vs  $63.2 \pm 17.2$ ), and had more comorbidities such as COPD, hypertension, diabetes, CKD (all  $P < 0.05$ ). Notably, patients with anticoagulation before admission had lower d-dimer (median  $1.49$  [IQR  $0.75, 2.81$ ] vs  $1.66$  [ $0.89, 3.51$ ]  $\mu\text{g/mL}$ ,  $P=0.01$ ). In a propensity score matched analysis ( $N=248$  in each group), in-hospital mortality was not significantly different in patients with anticoagulation before admission compared to those without ( $33.1\%$  vs  $33.9\%$ ,  $P=0.92$ ). In addition, these differences were not significant after excluding endotracheal intubation from both groups or excluding patients with anticoagulation during hospitalization in the control group. Furthermore, multiple imputation for missing data did not change the result.

**Conclusion:** Anticoagulation before admission was not associated with lower risk of in-hospital mortality of COVID-19 patients. Further investigation is needed to confirm these findings.