Incidence of Gastrointestinal Bleed (GIB) in COVID-19 Patients Treated with Anticoagulation Based on D-dimer Levels

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INTRODUCTION

Due to the impact of COVID-19 at St. Joseph's University Medical Center (SJUMC), a protocol was created to prevent blood clots in patients admitted for COVID-19 based on d-dimer level. Patients with d-dimer level ≥5 were started on a therapeutic anticoagulation dose of Lovenox or Heparin while those with a d-dimer level <5 but ≥2 were treated with half therapeutic anticoagulation. This study was done to evaluate the incidence of GI bleed in patients started on anticoagulation during their hospital stay. Our goal was to investigate the anticoagulation protocol in hospitalized COVID-19 positive patients and its impact on the incidence of GIB in an acute care hospital setting.

METHODS

A retrospective analysis was done on COVID-19 positive patients hospitalized from 3/1/2020 to 5/31/2020. Patients with d-dimer ≥ 5 were started on a therapeutic anticoagulation. Those with d-dimer <5 but ≥ 2 were treated with half therapeutic anticoagulation. Only those on Heparin or Lovenox were included.

RESULTS

The incidence of GIB was 0.79% in our sample population (507 patients). 3 of 139 patients receiving Heparin experienced GIB compared to 1 of 368 given Lovenox. In 354 patients with d-dimer < 5, 1 had GIB. In 153 patients with d-dimer ≥5, 3 had GIB. Based on logistic regression, GIB is significantly related with length of stay (p value = 0.000476) and days of anticoagulation before bleed (p value <0.001). Based on Fisher exact tests, GIB is not significantly associated with sex (p value = 0.6435), ethnicity (p value = 0.1668), D-dimer level (p value = 0.08422), and anticoagulation type (p value = 0.06472). However, GIB is significantly associated with MICU transfer (p value = 0.001902).

CONCLUSION

The use of Lovenox or Heparin in COVID-19 positive patients, admitted to an acute care hospital, did not significantly effect on the incidence of GIB. This study opens the door for investigation of other forms of anticoagulation for the prophylactic treatment of COVID-19.