ELEVATED D-DIMER LEVELS PREDICTS MORTALITY IN COVID-19 WITH STROKE: ANALYSIS OF MULTI-CENTER ELECTRONIC HEALTH RECORD DATA

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Abstract P-043 Figure 1 A Receiver operator characteristic curves for D-dimer to predict deaths in COVID-19; B. Kaplan-Meier survival estimates

Conclusion

Intravenous TNK in patients with LVOAIS is feasible, safe and effective. In our cohort from ‘real world’ patients, TNK was associated with lower need for MT, higher recanalization rates and shorter hospitalization.

Disclosures


INTRODUCTION

Coronavirus disease (COVID-19) has been associated with coagulopathy, and D-dimer levels have been implicated as predictors of disease severity. In this study, we examined whether D-dimer remains useful to predict mortality in COVID-19 patients presenting with acute ischemic stroke (AIS).

METHODS

We conducted a retrospective cohort study using the Optum® de-identified COVID-19 Electronic Health Record (EHR) dataset. Patients were included if they were 18 and older, were hospitalized within 7 days of confirmed COVID-19 from March 1, 2020 - November 30, 2020, and were tested for D-dimer during their hospitalization. ICD-9 and 10 diagnostic codes were used to identify AIS and comorbidities. D-dimer level was evaluated using receiver-operator curve analysis for the optimal threshold to predict in-hospital mortality and Kaplan-Meier survival curves were constructed. Risks of in-hospital mortality were compared between patients with D-dimer levels below and above the cut-off and risk ratios (RRs) were estimated adjusting for baseline characteristics and clinical variables.

RESULTS

Among 15,250 patients hospitalized with COVID-19 positivity, 285 presented with AIS at admission (2%). Patients with AIS were older (median age 70 [60-79] vs 64 [52-75]) and had higher prevalence of congestive heart failure, hypertension, diabetes, vascular disease and atrial fibrillation. D-dimer levels at admission were greater for patients presenting with AIS (median [I QR], 1.42 [0.76-3.96] µg/ml feu) compared to those without AIS (0.94 [0.55-1.81] µg/ml feu) and peak levels were also greater for patients with AIS (3.86 [1.23-15.58] vs 1.42 [0.76-3.96] µg/ml feu). Peak D-dimer level was a good predictor of in-hospital mortality among all patients (c-statistic 0.774 [95% CI 0.764-0.784]) and among patients with AIS (c-statistic 0.751 [95% CI 0.691-0.810]). The optimum cutoff threshold was identified as 2.07 µg/ml feu with 72% sensitivity and 70% specificity, and elevated peak D-dimer level above this cut-off was associated with almost 3 times increased mortality (adjusted RR 2.89 [95% CI 1.87-4.47]).

CONCLUSIONS

Peak D-dimer levels above 5.15 µg/ml feu are associated with increased mortality in COVID-19 patients with AIS.

Disclosures


INTRODUCTION

Cerebral vasospasm after aneurysmal subarachnoid hemorrhage is linked to delayed cerebral ischemic and worse neurological outcomes. Pharmacological treatment with intra-arterial vasodilators allows for transient improvement in cerebral perfusion. Balloon angioplasty may provide durable luminal gain, but risks vessel rupture and thromboembolic events. The Neva VS is a novel cerebral dilation device based on arterial vasodilators allowing for transient improvement in cerebral perfusion. Balloon angioplasty may provide durable luminal gain, but risks vessel rupture and thromboembolic events. The Neva VS is a novel cerebral dilation device based on