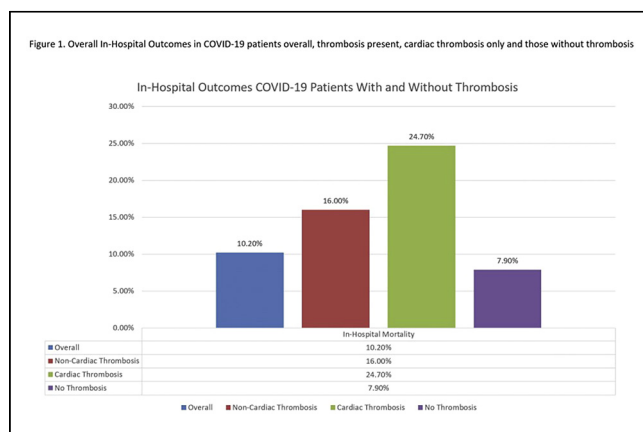


Chava Chezaz-Azerrad,² Cheng Zhang,⁶ Lowell Satler,¹ Itsik Ben-Dor,⁷ Hayder Hashim,² Toby Rogers,¹ William Weintraub,⁸ Ron Waksman²
¹MedStar Washington Hospital Center, Washington, DC, USA; ²MedStar Washington Hospital Center, Washington, DC, USA; ³MedStar Washington Hospital Center, Washington, DC, USA; ⁴MedStar Washington Hospital Center, Brooklyn, New York, USA; ⁵MedStar Washington Hospital Center, Washington, DC, USA; ⁶MedStar Cardiovascular Research Network, Washington, DC, USA; ⁷MedStar Washington Hospital Center, Rockville, Maryland, USA; ⁸MedStar, Washington DC, USA

BACKGROUND Venous thromboembolism (VTE) in coronavirus disease 2019 (COVID-19) has been established. We sought to evaluate the clinical impact of thrombosis in COVID-19-positive patients over the span of the pandemic to date.

METHODS We analyzed COVID-19-positive patients with the diagnosis of thrombosis who presented to the MedStar Health system (11 hospitals in Washington, DC and Maryland) during the pandemic (March 1, 2020 to March 31, 2021). We compared clinical course and outcomes based on the presence or absence of thrombosis and then cardiac thrombosis specifically.

RESULTS The cohort included 11,537 COVID-19-positive admitted patients. Of these patients, 1,248 had noncardiac thrombotic events (VTE or stroke), and 1,009 patients had cardiac thrombosis (myocardial infarction) during their hospital admission. In the thrombosis arm, the cohort's mean age was 64.5 ± 15.3 years, 53.3% were men and the majority African American (64.9%). Patients with thrombosis tended to be older, with more comorbidities. White blood cell count, creatinine, C-reactive protein, lactate dehydrogenase, and ferritin were all significantly higher in the thrombosis cohort compared with those patients without thrombosis. In-hospital mortality was significantly higher (16.0%) in COVID-19-positive patients with concomitant thrombosis than those without thrombosis (7.9%; $P < 0.001$) but less compared with COVID-19-positive patients with cardiac thrombosis (24.7%; $P < 0.001$; Figure 1).



CONCLUSION Patients with COVID-19 and thrombosis are at higher risk for in-hospital mortality. However, this prognosis is not as grim as cardiac thrombosis. Efforts should focus on early recognition, evaluation, and intensifying care of these patients.

CATEGORIES ENDOVASCULAR: Pulmonary Embolism and Pulmonary Hypertension

TCT-66

Choice and Outcomes of Left Main Coronary Disease Revascularization Strategies in England Before and After the COVID-19 Era

Mohamed Mohamed,¹ Nick Curzen,² Mark de Belder,³ James Spratt,⁴ Muhammad Rashid,⁵ Ahmad Shoaib,⁶ Chris Gale,⁷ Tim Kinnaird,⁸ Mamas Mamas⁹

¹Keele University, Stoke on Trent, United Kingdom; ²University Hospital Southampton, Southampton, United Kingdom; ³Barts Health NHS Trust, London, United Kingdom; ⁴St George's Hospital University Trust, London, United Kingdom; ⁵Keele University, Stoke, United Kingdom; ⁶Royal Stoke University Hospital, Stoke-on-Trent, United Kingdom; ⁷Leeds University, Leeds, United Kingdom; ⁸UHW, Penarth,

United Kingdom; ⁹Royal Stoke Hospital, Stoke-on-Trent, United Kingdom

BACKGROUND There are limited data on the impact of the COVID-19 pandemic on left main (LM) coronary revascularization activity, choice of strategy, and post-procedural outcomes.

METHODS All patients with LM disease ($\geq 50\%$ stenosis) undergoing coronary revascularization in England between January 1, 2017 and August 19, 2020 were included ($n = 22,235$), stratified by time period (pre-COVID: January 1, 2017 to February 29, 2020; COVID: March 1, 2020 to August 19, 2020) and revascularization strategy (percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG)). Logistic regression models were performed to examine odds ratio (OR) of receipt of CABG (vs percutaneous coronary intervention [PCI]) and in-hospital and 30-day postprocedural mortality in the COVID-19 period (vs pre-COVID).

RESULTS There was a decline of 1,354 LM revascularization procedures between March 1 and July 31, 2020 compared with previous years' (2017 to 2019) averages (-48.8%). Increased use of PCI over CABG was observed in the COVID period (receipt of CABG vs PCI: OR 0.46 [0.39, 0.53] compared with 2017), consistent across all age groups. No difference in adjusted in-hospital or 30-day mortality was observed between pre-COVID and COVID periods for both PCI (OR: 0.72 [0.51, 1.02] and 0.83 [0.62, 1.11], respectively) and CABG (OR: 0.98 [0.45, 2.14] and 1.51 [0.77, 2.98], respectively) groups.

CONCLUSION LM revascularization activity has significantly declined during the COVID period, with a shift toward PCI as the preferred strategy. Post-procedural mortality within each revascularization group was similar in the pre-COVID and COVID periods, reflecting maintenance in quality of outcomes during the pandemic. Future measures are required to safely restore LM revascularization activity to pre-COVID levels.

CATEGORIES OTHER: Quality, Guidelines, Appropriateness Criteria, Cost-Effectiveness, and Public Health Issues

TCT-67

Mechanical Circulatory Support in Patients With COVID-19 Presenting With Myocardial Infarction: Analysis From the North American COVID-19 Myocardial Infarction Registry

Raviteja Guddeti,¹ Cristina Sanina,² Timothy Henry,³ Payam Dehghani,⁴ Ross Garberich,⁵ Christian Schmidt,⁶ Keshav Nayak,⁷ Jay Shavadia,⁸ Akshay Bagai,⁹ Chadi Alraies,¹⁰ Aditya Mehra,¹¹ Santiago Garcia¹

¹Minneapolis Heart Institute, Minneapolis, Minnesota, USA; ²Montefiore Medical Center, Bronx, New York, USA; ³The Lindner Center for Research and Education at The Christ Hospital, Cincinnati, Ohio, USA; ⁴Prairie Vascular Research Inc, Regina, Saskatchewan, Canada; ⁵Minneapolis Heart Institute Foundation, Minneapolis, Minnesota, USA; ⁶Minneapolis Heart Institute, Minneapolis, Minnesota, USA; ⁷Scripps Mercy, San Diego, California, USA; ⁸Royal University Hospital, Saskatoon, Saskatchewan, Canada; ⁹St. Michael's Hospital, Toronto, Ontario, Canada; ¹⁰Detroit Medical Center Heart Hospital, Detroit, Michigan, USA; ¹¹Jersey Shore University Medical Center, Neptune, New Jersey, USA

BACKGROUND ST-segment elevation myocardial infarction (STEMI) complicating COVID-19 infection is associated with increased risk of mortality and stroke. However, little is known about the use of mechanical circulatory support (MCS) among these patients.

OBJECTIVES This article aims to define the patient characteristics and outcomes among COVID-19 patients with STEMI needing mechanical circulatory support.

METHODS In this prospective, ongoing observational registry, patients with STEMI requiring MCS were compared with those who did not receive MCS. Baseline patient characteristics and in-hospital outcomes were compared between the 2 groups. Primary outcome of interest was a composite of in-hospital mortality, stroke, recurrent MI, and repeat unplanned revascularization.

RESULTS A total of 377 patients from the North American Covid-19 Myocardial Infarction (NACMI) registry were included in this analysis; MCS devices were used in 13.5% of these patients (51 COVID+/MCS+ vs 326 COVID-/MCS-). Men constituted 70.3% of all patients (75% in COVID+/MCS+ vs 70% in COVID-/MCS-). COVID+/MCS+ patients were more likely to be Caucasians compared with COVID-/MCS- patients (63% vs 46%; $P = 0.027$). Forty-four percent of patients in the COVID+/MCS+ group presented with shock versus 10% in the COVID-/MCS- group ($P < 0.001$). Mean ejection fraction was significantly