

Outcomes from COVID-19 STEMI Research Study Presented in TCT Late-Breaking Clinical Science Session

COVID-Positive Patients with ST-Elevation had Higher In-Hospital Mortality

ST-Elevation Occurred More Frequently in Blacks, Hispanics and Diabetics

MINNEAPOLIS – Oct. 14, 2020 – The Minneapolis Heart Institute Foundation® (MHIF) announced today that first outcomes from the North American COVID-19 ST-Segment Elevation Myocardial Infarction (NACMI) Registry are being presented today at the Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Outcomes show minorities represent greater than half of COVID-positive patients with heart attacks, compared to less than 10 percent in the Midwest STEMI consortium (MSC), a heart attack registry representing non-COVID patients. Data from the registry also show that COVID-positive patients with ST-elevation had higher in-hospital mortality and stroke with longer length of hospital stay. The data are being presented as part of the virtual late-breaking clinical science session by incoming Society for Cardiac Angiography and Interventions (SCAI) president Timothy Henry, MD, on behalf of NACMI study investigators. MHIF served as the coordinating data center for NACMI and MSC.

“This effort is a collaboration between cardiovascular experts across North America to gather real-time insights that can guide care and benefit patient outcomes during this pandemic,” said Santiago Garcia, MD, interventional cardiologist, MHIF researcher and primary investigator for MHIF. “These initial outcomes are showing us that heart attacks in COVID-positive patients disproportionately affect minorities and that traditional, standard-of-care interventions, including coronary angiography and primary angioplasty, are used less often. This is a call to our colleagues to recognize that COVID-positive patients with ST-elevation represent a unique and high-risk patient population and we need to address with care protocols that will advance outcomes.”

Additional outcomes presented today (compared to both PUI and propensity matched controls):

- ST-elevation occurred more frequently in blacks, hispanics and diabetics
- COVID-positive patients with ST-elevation were more likely to present with cardiogenic shock (but not cardiac arrest) with lower LVEF, more atypical symptoms and slightly higher in-hospital presentation
- COVID-positive patients with ST-elevation were more likely to not receive angiography (21 percent); of those who received angiography, 71 percent received primary percutaneous coronary intervention (PPCI) and 20 percent medical therapy
- No differences in culprit vessel and similar door to balloon times
- COVID+ patients with ST-elevation had higher in-hospital mortality (32 percent) and stroke (3 percent) with longer length of stay

“This research registry represents a successful collaboration of North American interventional cardiologists and we will continue to pursue data to guide the care of a unique and high-risk population of patients with COVID-19 and heart attacks,” said Dr. Garcia. “Even out of this initial data, it is clear that timely primary PCI is feasible, even meeting current standard-of-care goals for time-to-treatment (door-to-balloon) in patients who are potentially COVID-positive.”

MHIF is the International Coordinating and Data Center for the NACMI registry, which is a research study designed to collect data on COVID-19 positive patients or persons under investigation (PUI, suspected to have COVID-19 infection) with ST-Elevation Myocardial Infarction (STEMI), a serious heart attack involving a blockage in one of the heart's major arteries that supplies oxygen and nutrient-rich blood to the heart muscle. The registry is a collaborative effort between the Society for Cardiovascular Angiography and Interventions (SCAI) and the Canadian Association of Interventional Cardiology (CAIC). There are currently 64 clinical sites across the U.S. and more than 594 patients enrolled in the registry (171 COVID-positive; 423 PUI).

The study is expected to have up to 100 sites participating throughout the United States and Canada. The registry is collecting information on COVID-19 positive patients or PUI with ST-segment elevation or new-onset left bundle branch block with a clinical correlate of myocardial ischemia (chest pain, dyspnea, cardiac arrest, hemodynamic instability, mechanical ventilation). The data from these patients will be compared to an age and gender-matched control population of typical STEMI patients from the existing Midwest STEMI Consortium, which is a large (>15,000), prospective multi-center registry of consecutive STEMI patients for which MHIF is the data coordinating center.

The late-breaking clinical session is available via the conference website, www.tctconnect.com.

About Minneapolis Heart Institute Foundation®

The Minneapolis Heart Institute Foundation (MHIF) strives to create a world without heart and vascular disease. To achieve this bold vision, it is dedicated to improving the cardiovascular health of individuals and communities through innovative research and education.

Scientific Innovation and Research – MHIF is a recognized leader across all specialties of heart and vascular research. Each year, MHIF leads more than 200 research studies with more than 2,200 patients and publishes more than 200 articles to share learnings from research. MHIF research has improved the standard of care around the world through protocols like Level One for heart attack, which significantly improved outcomes and survival for patients.

Education and Outreach – MHIF provides more than 10,000 hours of education each year putting its research into practice to improve outcomes among health care providers. This commitment extends to patients and caregivers through a number of community health and education events to raise awareness of heart care and research, engaging individuals in their own health.

The Minneapolis Heart Institute Foundation's work is funded by generous donors and sponsors and engages in cutting-edge research initiatives with its physician partners from the Minneapolis Heart Institute® at Abbott Northwestern Hospital and at 38 community sites across Minnesota and western Wisconsin. For more information, please visit mplsheart.org.

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