Not all patients with certain type of heart attack receive the same care

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There are several different types of heart attacks, which occur when blood flow to the heart is blocked or reduced. New research by investigators at Massachusetts General Hospital (MGH) reveals considerable uncertainty in how to care for patients with one type. The findings, which were published in *Circulation: Cardiovascular Quality and Outcomes* to coincide with the American Heart Association's Scientific Sessions 2020, point to the need for clinical trials to provide more guidance to physicians.

The cause of type 2 myocardial infarction is not from rupture of a plaque in the blood vessels but rather from medical conditions that contribute to an imbalance between oxygen supply and demand in the heart. "Initial management typically focuses on treating the medical illness that precipitated the heart attack; however, we now have evidence that patients with this type of heart attack have high rates of recurrent cardiovascular events and may need tailored follow-up care," says investigator and lead author Cian P. McCarthy, a cardiology fellow at MGH.

To investigate how these patients are treated during their hospital admission and afterwards, McCarthy and his colleagues examined the electronic health records of patients with type 2 myocardial infarction at MGH between October 2017 and May 2018. "We sought to investigate how frequently patients with this type of heart attack are evaluated by a cardiologist during their admission, and whether this is associated with differences in cardiac testing and treatment," McCarthy says. "In addition, we wanted to explore: How often do patients receive follow-up care with a cardiologist after discharge, given their cardiovascular risk?"

Among 359 patients identified, 207 (57.7%) were evaluated by cardiologists, 120 (33.4%) received cardiology consultation requests, and 87 (24.2%) were admitted or transferred to the cardiology department. Patients evaluated by cardiologists more commonly underwent stress tests and heart imaging exams during their hospital admission, and they were more likely to be discharged on a statin and a beta blocker. There were no differences in death rates among those who were or were not evaluated by cardiologists.

Among patients who were discharged, 38.4% had an outpatient cardiology follow-up visit within six months, and patients who were evaluated by cardiologists during their hospital admission were more likely to have such follow-up visits.

The analysis raises the possibility of gaps in care for patients with type 2 myocardial infarction. "These data highlight the uncertainty among clinicians on how to best manage patients with this type of heart attack," says McCarthy. He notes that because no clinical trials have addressed this specific patient population, the roles of cardiologists, traditional heart attack medications, and stenting or bypass surgery are unknown. "As these patients have high rates of recurrent cardiovascular events, my personal opinion is that they should be seen by a cardiologist either during

their admission or as an outpatient after discharge; however, we need clinical trials to investigate this."

Senior author Jason H. Wasfy, MD, director of Quality and Analytics at MGH's Corrigan Minehan Heart Center, notes that the wide variation in care provided to patients with type 2 myocardial infarction might point to different treatment strategies that could be tested prospectively in randomized trials. "We need to develop validated treatment strategies because the prognosis for these patients is sobering," he says.

More information: Cian P. McCarthy et al, Cardiologist Evaluation of Patients with Type 2 Myocardial Infarction, *Circulation: Cardiovascular Quality and Outcomes* (2020). DOI: 10.1161/CIRCOUTCOMES.120.007440

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