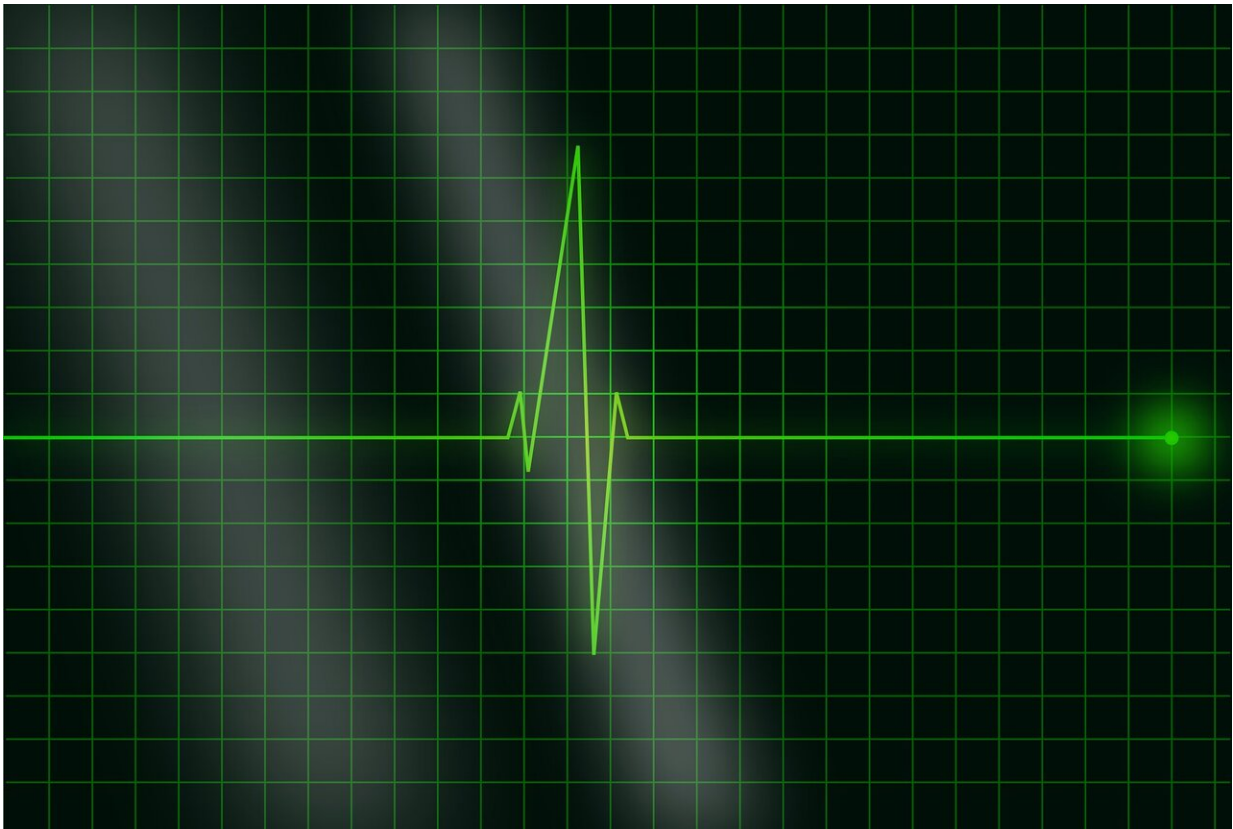


Worse outcomes observed after heart attacks during pandemic compared to previous year

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Heart attacks during the COVID-19 pandemic were more likely to result in heart failure compared with heart attacks one year earlier, according to research presented today at Heart Failure 2021, an online scientific

congress of the European Society of Cardiology (ESC).

"Heart attack patients waited an average of 14 hours to get help during the [pandemic](#), with some delaying for nearly two days. That compares to a delay of six hours in the previous year," said study author Dr. Ali Aldujeli of the Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania. "This gap may have been one contributor to the higher incidence of subsequent [heart](#) failure."

Urgent treatment for heart attacks is essential to restore the flow of oxygen-rich blood to the [heart muscle](#). A longer duration of oxygen deprivation is associated with a greater area of damaged muscle and reduced pump function (called ejection fraction), which is a type of heart failure.

This study compared treatment delays, post-treatment [ejection fraction](#), and decompensated heart failure hospitalisation rate in [heart attack](#) patients before versus during the COVID-19 pandemic.

The retrospective, multicentre study covered six out of ten administrative regions in Lithuania. The study included consecutive patients with [acute myocardial infarction](#) who received a negative test result for COVID-19 infection between 11 March and 20 April 2020 and underwent invasive treatment. The data were compared to patients admitted with the same diagnosis during the same period in 2019. Patients were followed up for six months following hospital discharge.

A total of 269 [heart attack patients](#) were evaluated in the study. There was a 34.0% decline in heart attack admissions during the early phase of the pandemic compared to the same period in 2019. Patients waited significantly longer before presenting to hospital during the pandemic compared to 2019 (a median of 858 versus 386 minutes, respectively).

Admission rates and delays were less pronounced for heart attacks with complete blockage of the heart arteries (ST-elevation myocardial infarction; STEMI) compared to non-STEMI. Admission rates fell by 22.1% for STEMI and 47.4% for non-STEMI. Patient delays more than doubled for STEMI patients during the pandemic and increased by more than fourfold for non-STEMI patients.

Dr. Aldujeli said: "Declines in admissions and delays in seeking treatment may be partly attributed to the extensive media coverage which amplified patients' fear of contracting COVID-19 and precluded them from seeking timely medical care. A possible explanation for the differences according to type of heart attack could be because STEMI patients tend to have more acute and intense symptoms compared to those with non-STEMI."

Post-treatment pump function was significantly lower during the pandemic compared to 2019. At six months, 22% of patients who had a heart attack during the pandemic were admitted to the hospital with decompensated heart failure compared to 2.5% in 2019.

When the authors examined the results by type of heart attack, they found that at six months, nearly one-third of patients (30%) who had non-STEMI during the pandemic were admitted to the hospital for decompensated [heart failure](#) compared to 1.3% in 2019. For STEMI, the corresponding proportions of admissions were 16.4% during the pandemic versus 3.5% in 2019.

Dr. Aldujeli said the outcomes according to type of heart attack may have been influenced by new pandemic-specific protocols implemented to prevent spread of the virus. Patients diagnosed with STEMI according to an electrocardiogram (ECG) were prioritised for urgent treatment (i.e. without waiting for a COVID-19 test result) and staff used personal protective equipment (PPE) during the procedure. Patients with non-

STEMI were deemed less urgent and were isolated for around 24 hours while waiting for COVID-19 test results, which dictated whether staff needed PPE during the procedure or not.

Dr. Aldujeli said: "Our findings suggest that all heart attacks during a pandemic should be treated urgently with staff using PPE. More balanced media coverage is also needed so that patients do not wait to seek help in medical emergencies."

More information: Association between delayed revascularization during the covid-19 pandemic and rates of post myocardial infarction heart failure hospitalizations. Heart Failure 2021 & World Congress on Acute Heart Failure

Provided by European Society of Cardiology

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