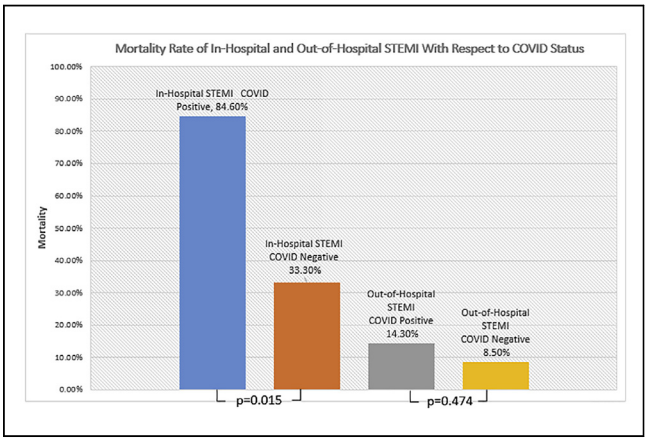
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.



CONCLUSION Our study confirmed significantly higher mortality in all patients with in-hospital STEMI compared with out-of-hospital STEMI. COVID-19-positive patients with an in-hospital STEMI had a striking mortality of 84.6%.

CATEGORIES CORONARY: Acute Myocardial Infarction

TCT-551

The Effect of the COVID-19 Vaccines on Individuals Who Develop Incidences of Nontraumatic Intracranial Hemorrhages

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BACKGROUND The effect of messenger RNA COVID-19 vaccines on individuals who develop incidences of nontraumatic intracranial hemorrhages is still poorly misunderstood. Previous research from varying sources has indicated the presence of a nontraumatic intracranial hemorrhage in conjunction with exposure to COVID-19. This research aims to understand if a difference exists between nontraumatic hemorrhagic events with those who received the Pfizer, Moderna, and Johnson & Johnson vaccine compared with those who contracted COVID-19 with no previous vaccination.

METHODS The researchers queried TriNetX (Covid-19 Research Network) of 67 health care organizations. They analyzed data from January 20, 2020, to February 14, 2022, and identified 1,467,116 laboratory-confirmed COVID-19 cases that did not receive a COVID-19 vaccine (Pfizer, Moderna, and Johnson & Johnson or any other at the time of their diagnosis). The researchers identified 1,008,708 Pfizer cases with second doses completed, 784,622 Moderna cases with a completed second dose, and 32,094 Johnson & Johnson cases with completed doses. The researchers created 3 different cohorts to assess the endpoints of nontraumatic hemorrhagic events using COVID-19 as a control against the selected vaccine cohorts. A propensity score matching of a 1:1 was performed to match on the covariates (age, female, male, hypertension, diabetes, coronary artery disease, and chronic obstructive pulmonary disease). The researchers compared the endpoint of nontraumatic hemorrhagic events within 30 days.

RESULTS A total of 3,292,540 patients were included. Of those 1,467,116 (44.5%) labs confirmed COVID-19 that did not have a record of a COVID-19 vaccine (30.6%) 1,008,708 completed Pfizer case, and 784,622 (23.8%) were given Moderna vaccine, and finally (1.1%) 32,094 were given Johnson & Johnson vaccine. Nontraumatic hemorrhagic events were reduced in Pfizer cases (0.014% vs 0.144%; $P < 0.001$) (100% risk reduction) compared with lab-confirmed COVID-19 that did not receive a COVID-19 vaccine at 30 days. Moderna cases reduced hemorrhagic events (0.008% vs 0.154%; $P < 0.001$) (94.6% risk reduction), as did Johnson & Johnson (0.069% vs 0.174%; $P = 0.001$) (59.7% risk reduction).

CONCLUSION The results illustrate that there is a reduction in nontraumatic hemorrhagic events within 30 days with use of the COVID-19 vaccine.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy

TCT-552

Abstract Withdrawn

TCT-553

Sixfold Increased Mortality in STEMI Patients With COVID-19 vs Without in a Large Hospital System in South Florida

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BACKGROUND Previous studies of myocardial infarction registries have shown worse outcomes in ST-segment elevation myocardial infarction (STEMI) patients with COVID-19 infection. The purpose of this study was to compare the demographic and angiographic characteristics and in-hospital outcomes of STEMI patients with and without COVID-19 infection.

METHODS We conducted a single-center, retrospective observational study of all patients admitted to Memorial Healthcare System facility hospitals from April 1, 2020, to August 31, 2021, who had a STEMI. The primary outcome was in-hospital mortality. Secondary outcomes were intensive care unit (ICU) admission, cardiogenic shock, and angiographic features.

RESULTS A total of 303 patients were included, with 20 of those being COVID-19 positive. There were no significant differences in baseline characteristics, with the exception of a higher rate of preadmission aspirin use, history of myocardial infarction, and smoking in the non-COVID-19 group. The incidence of in-hospital mortality, cardiogenic shock, and ICU admission was significantly higher in COVID-19-positive patients (Table 1). Patients with COVID-19 infection were less likely to receive cardiac catheterization (70% vs 97.9%; $P < 0.001$), and even if they went to the cath lab, the mortality was still significantly higher than that of COVID-19-negative patients (42.8% vs 8.7%; $P < 0.001$).

Table 1. Clinical Outcomes of STEMI Patients

	COVID Negative n=282	COVID Positive n=20	p value
Primary outcome, n (%)			
In-hospital death	27/282 (9.6)	12/20 (60)	<0.001
Went to Cath Lab	24/276 (8.7)	6/14 (42.8)	<0.001
Did Not Go to Cath Lab	3/6 (50)	6/6 (100)	0.182
Secondary outcomes			
Cardiogenic shock, n (%)	45/282 (15.9)	7/20 (35)	0.029
ICU admission, n (%)	73/282 (25.9)	13/20 (65)	<0.001
Hospital length of stay, days	2.3 (1.6-4.3)	10.3 (2.0-21.7)	<0.001

CONCLUSION Our study confirms prior studies showing significantly worse outcomes in COVID-19-positive STEMI patients with respect to in-patient mortality, ICU admission, and cardiogenic shock. Most striking was an in-hospital mortality of 60% for COVID-19 STEMI patients.

CATEGORIES CORONARY: Acute Myocardial Infarction