

Cardiovascular Disease After COVID-19

A population-based study in the U.K. adds to evidence of an association, particularly in those hospitalized for COVID-19.

There is mounting evidence suggesting that an infection with SARS-CoV-2 can increase cardiovascular risk (*NEJM JW Gen Med* May 1 2022 and *Nat Med* 2022; 28:583). Here, investigators leveraged the large UK Biobank cohort to examine the association of SARS-CoV-2 infection with incident cardiovascular events among almost 18,000 participants between March 2020 and 2021.

The investigators identified people with a SARS-CoV-2 infection and matched each one with two uninfected controls using a propensity model that included age, sex, material deprivation, body-mass index, ethnicity, diabetes, prevalent ischemic heart disease, smoking, hypertension, and high cholesterol.

During a mean follow-up of approximately 5 months, compared with matched controls, participants who were not hospitalized ($\approx 14,300$) had increased risks for incident venous thromboembolism (hazard ratio, 3) and all-cause death (HR, 10), and those who were hospitalized with a primary diagnosis of COVID-19 (≈ 2700) had increased risks for venous thromboembolism (HR, 28); myocardial infarction (HR, 10); stroke (HR, 18); atrial fibrillation (HR, 15), heart failure (22); pericarditis (HR, 14); all-cause death (HR, 118), cardiovascular death (HR, 9), and ischemic heart disease death (HR, 14). The risks were highest in the first 30 days after COVID-19 diagnosis but remained high throughout follow-up for many of the outcomes.

COMMENT

The COVID-19 pandemic may have long-term effects on cardiovascular risk, heightening the importance of addressing modifiable risk factors. We are at risk of losing many of the gains we have made against cardiovascular disease. Whether vaccination modifies this association is not yet known. Cardiovascular risk algorithms may need to be recalibrated in this new age.

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Raisi-Estabragh Z et al. Cardiovascular disease and mortality sequelae of COVID-19 in the UK Biobank. Heart 2022 Oct 24; [e-pub]. (<https://doi.org/10.1136/heartjnl-2022-321492>)