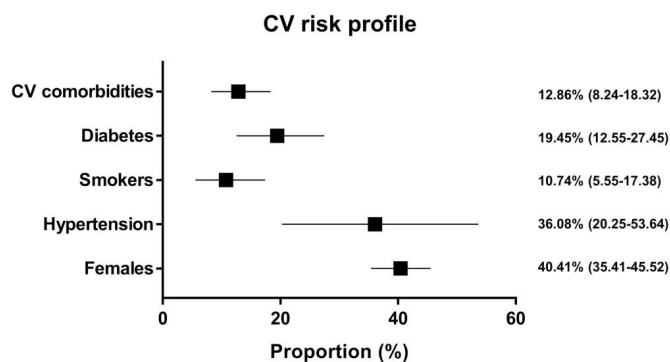


Cardiovascular risk factors tied to COVID-19 complications and death

14 August 2020



Cardiovascular risk profile of hospitalized COVID-19 patients. Each line represents the result of the meta-analysis for a single endpoint. The square represents the summary effect size (proportion) and the horizontal line the relative 95% Confidence Interval. Credit: Sabatino et al, 2020 (*PLOS ONE*, CC BY 4.0)

COVID-19 patients with cardiovascular comorbidities or risk factors are more likely to develop cardiovascular complications while hospitalized, and more likely to die from COVID-19 infection, according to a new study published August 14, 2020 in the open-access journal *PLOS ONE* by Jolanda Sabatino of Universita degli Studi Magna Graecia di Catanzaro, Italy, and colleagues.

For most people, the Novel Coronavirus Disease 2019 (COVID-19) causes mild illness, however it can generate severe pneumonia and lead to death in others. It is crucial for clinicians working with cardiovascular patients to understand the clinical presentation and [risk factors](#) for COVID-19 infection in this group.

In the new study, researchers analyzed data from 21 published [observational studies](#) on a total of 77,317 hospitalized COVID-19 patients in Asia, Europe and the United States. At the time they were admitted to the hospital, 12.89% (95% CI

8.24-18.32) of the patients had cardiovascular comorbidities, 36.08% (95% CI 20.25-53.64) had hypertension and 19.45% (95% CI 12.55-27.45) had diabetes.

Cardiovascular complications were documented during the [hospital stay](#) of 14.09% (95% CI 10.26-20.23) of the COVID-19 patients. The most common of these complications were arrhythmias or palpitations; significant numbers of patients also had myocardial injury. When the researchers analyzed the data, they found that pre-existing cardiovascular comorbidities or risk factors were significant predictors of [cardiovascular complications](#) ($p=0.019$), but age ($p=0.197$) and gender ($p=0.173$) were not. Both age and pre-existing cardiovascular comorbidities or risk factors were significant predictors of death.

The authors add: "Cardiovascular complications are frequent among COVID-19 patients and might contribute to adverse clinical events and mortality."

More information: Sabatino J, De Rosa S, Di Salvo G, Indolfi C (2020) Impact of cardiovascular risk profile on COVID-19 outcome. A meta-analysis. *PLoS ONE* 15(8): e0237131. doi.org/10.1371/journal.pone.0237131

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