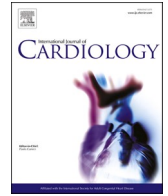




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Letter to the Editor

Genetic factors may affect the severity of COVID-19



To the Editor:

We have read with great interest of the article by Minhas et al. [1], in which indicates adjusted odds of myocardial injury, ischemic stroke and all-cause mortality are significantly higher in men compared to women with COVID-19. Higher inflammatory markers are present in men but associated similarly with risk in both men and women, suggesting that adverse cardiovascular outcomes in men vs. women are independent of cardiovascular comorbidities.

This finding is important, previous studies suggest men have consistently higher mortality from COVID-19 compared to women and this sex difference in mortality may be related to greater underlying comorbidities in men, such as cardiovascular disease (CVD), which have been linked to increased severity of COVID-19 [2,3]. Therefore, these cannot explain the various changes in the severity of the illness. There is also a genetic factor that cannot be ignored. Based on the difference in severity, researchers found 4 sites related to the susceptibility and 9 sites related to the severity of COVID-19. The identified chromosomal loci include some genes that have been found to be associated with autoimmune diseases, inflammatory diseases, or lung diseases in past studies. For example, a variant of DPP9 will increase the risk of severe COVID-19, while the same variant will also increase the risk of lung disease characterized by scarring of lung tissue. Another genomic mutation in the OAS gene causes a decrease in the OAS1 enzyme in the blood. OAS1 can digest viral RNA, and a decrease in OAS1 increases the risk of infection, hospitalization, and critical illness [4]. Currently, pharmaceutical company is conducting research and development work on OAS [5].

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Declaration of Competing Interest

None declared.

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