Review of: "[Hypothesis] The protective role of Testosterone in COVID-19"

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Potential competing interests: No potential competing interests to declare.

Review of "[Hypothesis] The protective role of Testosterone in COVID-19". This review proposes that testosterone is established as a protective factor for the severity of COVID-19 because it physiologically exerts an immunomodulatory pathway with anti-inflammatory activity in severe COVID-19 infected patients.

The introduction lacks information between the approximate correlation between severe morbidity and mortality from COVID-19, observed in older men, and decreased testosterone levels could suggest a causal relationship.

The role testosterone plays in calcium homeostasis and how COVID-19 manipulates intracellular calcium levels for cell/organ replication and damage.

Also, since testosterone has anti-inflammatory activity, lower testosterone levels can lead to more inflammatory tissue damage and more severe disease. The specific aspect addressed (not the only mechanism of testosterone in COVID-19).

The aut

hors (and other researchers) reasonably suggest that the correlation between low testosterone levels in older men and the severity of COVID-19 symptoms is causal and requires further research to investigate the mechanisms.

The manuscript is not new, there is diverse literature on this topic, and it is not exhaustively treated either.