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LETTER TO THE EDITORS

The anti-infectious effect of antidepressants in psychiatric COVID-19 patients remains unproven

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We read with interest Sanchez-Rico et al.'s observational, retrospective, multicentre study about the effect of psychiatric and non-psychiatric comorbidities on 28-day mortality in psychiatric patients with COVID-19.[1] It was found that mortality was significantly lower in patients with mood disorders than other psychiatric diseases.[1] The authors concluded that 28-day mortality was higher in all psychiatric patients with COVID-19, regardless of psychiatric and non-psychiatric comorbidities, and that the lower mortality in patients with mood disorders could have been due to the beneficial effect of certain antidepressants on COVID-19. This study is excellent, but it raises concerns that should be discussed.

We disagree with the conclusion that certain antidepressants may be beneficial against COVID-19 for several reasons.[1] First, the study design was not suitable for testing whether any particular medication has anti-SARS-CoV-2 effects. In general, the effects of drugs must be analysed in prospective, multicentre, double-blind, placebo-controlled, cross-over trials; other designs are unsuitable for drawing conclusions about the effectiveness of a drug. Second, there have been no other reports that antidepressants have antiviral effect against SARS-CoV-2 infection. Third, there are no real-world data suggesting that the incidence of COVID-19 is lower in patients who take antidepressants. Fourth, since patients with mood disorders often take other drugs in addition to antidepressants, it is impossible to determine the extent to which they interacted with antidepressants and whether they increased or decreased any potential antiviral effect.

One study limitation was that the clinical severity of SARS-CoV-2 infections was not reported. The more severe the SARS-CoV-2 infection, the less likely it is that antidepressants would have a positive effect on the infection. Therefore, the results may have been biased by including only mild SARS-CoV-2 infections. A second limitation was that the causes of death were not specified.[1] Did these patients die from COVID-19 or from an illness unrelated to SARS-CoV-2? A third limitation is that only a few comorbidities (such as pneumonia, arterial hypertension, or influenza infection) were considered. However, the spectrum of non-psychiatric co-morbidities may be much broader and may have greatly influenced the outcome in some patients. How could the authors determine that death was due to SARS-CoV-2 infection rather than one of these co-morbidities?

Overall, this interesting study has limitations that call its results and their interpretation into question. Clarifying these weaknesses would strengthen the conclusions and could add value to the study. Antidepressants do not appear to have anti-inflammatory effects in COVID-19 patients. To determine whether antidepressants may be of benefit in COVID-19, it is important to conduct appropriately designed studies on the anti-SARS-CoV-2 effects of antidepressants.

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Disclosure

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Author contributions

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