



Letter to Editor

Sunlight and SARS-CoV-2: A Case of Clinical Insignificance

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Letter to Editor

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Dear Editor,

Hussain et al. proposed an interesting opinion about the potential impact of sunlight on SARS-CoV-2 [1]. The authors introduced two possible mechanisms in which sunlight could contribute to better management and improved outcomes of COVID-19 infection; immunomodulatory effects of vitamin D and germicidal property of the ultraviolet (UV) light. The impact of vitamin D deficiency on the severity and mortality of COVID-19 and the positive effects of vitamin D supplementation have been shown in recent studies [2]. Regarding the other mechanism, although some previous

community-based observations have suggested the potential positive effect of direct sunlight on COVID-19 [3], it should be noted that apart from an insufficient duration of follow-up, these studies have too many confounding factors – which cannot be omitted or restricted. As stated by the authors, most terrestrial UV lights are composed of UVA, which is the least effective on this occasion. Furthermore, it should be taken into consideration that sunlight cannot be used as a reliable and definite treatment or prevention method for COVID-19. Even if there are definite results, sunlight does not seem to be a practical way to prevent or treat an infection. Recent experiences and evidence seem to cast doubt on the proposed theory. For instance, Brazil is located at a similar latitude and has a tropical climate quite similar to Indonesia (used as an example of positive effects in the higher duration of direct exposure to sunlight), where is experiencing a serious crisis of COVID-19 cases and deaths [4]. Moreover, although some of the results are statistically significant in favor of a positive effect, the most important features in clinical decision-making and the implementation of a treatment method are clinical significance and clinical applicability, both of which do not seem to exist in this case [5].

It appears that a clinical study of the effect of sunlight on the prevention and treatment of COVID-19 is difficult to design. Community-based studies with a sufficient number of cases also seem to be challenging because of a significant number of confounding variables. As the authors have stated, further studies are needed before drawing a conclusion.

We hope that the authors will further discuss their opinion on the proper design of a clinical study for this matter to guide and orient future studies.

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