COMMENT & RESPONSE

Vaccination After SARS-CoV-2 Infection and Post–COVID-19 Condition

To the Editor—In their recent systematic review and meta-analysis, Dr Tsampasian and colleagues reported risk factors associated with post–COVID-19 condition (PCC).1 According to the study analysis, female sex, older age, higher body mass index, smoking, preexisting comorbidities, and previous hospitalization or intensive care admission were significantly associated with developing PCC, and SARS-CoV-2 vaccination with 2 doses was associated with a lower risk of PCC. Although this article presents a topical research subject with a strong potential effect, 2 key issues need to be clarified before more robust conclusions can be made.

First, the review by Dr Tsampasian and colleagues1 lacks transparency regarding how studies were excluded from the review. It is unclear from eFigure 1 in Supplement 1 just how many articles were excluded at the full-text screening phase. Only 4 studies were included in the analysis when investigating the results regarding vaccination status. However, some studies that meet the inclusion criteria were not included in this review (PMID: 36028498, 35266128, 35339673, and 35605170). Excluding these studies without transparent justification may indicate selection bias.

Consequently, we have concerns regarding the reliability of the study’s analysis1 of vaccination status and PCC risk. COVID-19 vaccination before SARS-CoV-2 infection has been associated with reduced risk of PCC, and cumulative evidence suggests that 2 vaccine doses are more effective than 1.2,3 However, the conclusions on the effect of vaccination after SARS-CoV-2 infection on PCC are inconsistent, with some data showing changes in symptoms and others not, as reported by 3 systematic reviews.4-5 The findings of those studies state that vaccination after SARS-CoV-2 infection can significantly reduce PCC in patients3,4; however, it was not definitively associated with symptomatic changes of PCC.5

Therefore, the results of Dr Tsampasian and colleagues’ study regarding an association of COVID-19 vaccines with a reduced risk of developing PCC are inconsistent with the findings of other studies.3,5 Moreover, the researchers included only 4 studies to evaluate this risk1 and failed to adjust for combined vaccination before and after SARS-CoV-2 infection or after PCC diagnosis, potentially increasing the risk of bias and decreasing the certainty of the evidence. Importantly, the other studies enumerated previously also met the inclusion criteria but were excluded from the analysis.

Given the potentially strong influence that this review will have on current and future practices for preventing and treating PCC, we would like the authors to clarify the study selection process. We would also request that they address the limitations of the analysis regarding vaccination and the risk of developing PCC.

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Published Online: July 24, 2023. doi:10.1001/jamainternmed.2023.3033

Conflict of Interest Disclosures: Dr Yang reported a grant from the Canadian Institutes of Health Research (No. 177747) during the conduct of the study. No other disclosures were reported.

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