Dear Editor,

We write in response to the letter to the editor from Amnuay Keebayoon and Dr. Viroj Wiwanitkit. The authors of the letter noted that secondary syphilis should be called a comorbidity.

We agree that syphilis is a comorbidity in this patient and acknowledge that the progression of the patient’s syphilis would have occurred naturally at some point. However, the timing of the progression of the patient’s comorbid syphilis infection could have been impacted by the patient’s immune response from vaccination. Syphilis often has an insidious disease process, and the stimulation of the immune system afforded by the coronavirus disease 2019 (COVID-19) vaccination may have uncovered and exposed that active process. It is noted that no serious adverse event was reported. Therefore, as the letter notes, uncovering comorbidities is a potential benefit of the vaccine, as it will presumably ensure earlier diagnosis and treatment. Ultimately, secondary syphilis should be in the differential diagnosis in the appropriate clinical setting.

We acknowledge that correlation does not equal causation and that the natural progression from primary to secondary syphilis in this patient may be more likely than a novel catalyzed progression of the disease due to COVID-19 vaccination. We discussed this possibility in the paper when we stated: “This hypothesis would be difficult to prove as routine progression of the patient’s syphilis from primary to secondary stages from the natural course of disease without catalyzation from immunization was likely to occur.” Yet, due to the temporal association of the patient’s syphilis progression with vaccination and the plausible hypothesis that the described immune response could connect the two events, we felt that the discussion of the possibility for a relationship would benefit medical literature. While such a relationship has not otherwise been described in the literature, similar relationships (such as the relationship between COVID-19 vaccination and chronic spontaneous urticaria that is also discussed in this case) have already been described in a few case studies.

We agree that future study is needed to further our understanding of the pathophysiology of syphilis, its interplay with the immune system, and its response to vaccination. Finally, we would like to highlight that syphilis is not caused by or transmitted by COVID-19 vaccination. We believe this to be mutually understood already but feel that its brief mention was important, nonetheless.

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