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LETTER TO THE EDITOR

Correspondence

Correspondence on "Immune thrombocytopenia in 2 healthy young women after the Pfizer-BioNTech BNT16B2b2 messenger RNA coronavirus disease 2019 vaccination"

Dear Editor,

We are writing in response to the publication "Immune Thrombocytopenia in 2 Healthy Young Women After the Pfizer-BioNTech BNT16B2b2 Messenger RNA Coronavirus Disease 2019 Vaccination."[1] Collins et al[1] reported 2 cases and mentioned that "discussions with patients should put into perspective the low risks of vaccination against the enormous societal benefit of the coronavirus disease 2019 vaccine." We agree with the conclusion that the vaccination is generally safe. Regarding thrombocytopenia after coronavirus disease 2019 (COVID-19) vaccination, there is still no conclusive data on the pathomechanism.[2]

The following 3 possible scenarios for thrombocytopenia after vaccination exist[1]: abnormal immune response to the vaccine,[2] a preexisting thrombohemostasis problem or platelet disorder, and[3] an unrelated subsequent medical problem (eg, dengue).

In consideration of the first mechanism, a COVID-19 vaccine stimulates the immune system and the abnormal antibodies, including antiplatelet antibodies, might occur in some vaccine recipients.[2] The abnormal immune response is usually mentioned as a possible mechanism.[2] However, there are no clinical data on prevaccination thrombohemostatic status in almost all reported cases with thrombocytopenia.

Focusing on the second mechanism, a vaccine recipient might have an underlying thrombohemostasis problem or platelet disorder. The patient might already had thrombocytopenia and the problem might persist after COVID-19 vaccination. Asymptomatic thrombocytopenia is possible, and this clinical problem is detected only if there is a blood examination.[3] Nevertheless, the vaccine might make the preexisting disorder worse in some cases. In a recent report, 12% of vaccine recipients with underlying immune thrombocytopenia had a significant decreased platelet count within 2–5 days after COVID-19 vaccination.[4]

Concerning the third mechanism, other medical problems can also cause a thrombocytopenia problem during the post–COVID-19 vaccination period. A recent report on the post–COVID-19 vaccination occurrence of dengue-induced thrombocytopenia is the best example.[5] In the case with unrelated subsequent medical problems, thrombocytopenia might exist and be misinterpreted as an adverse effect of the COVID-19 vaccine.

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