

Comment on: Effects of COVID-19 vaccination on platelet counts and bleeding in children, adolescents, and young adults with immune thrombocytopenia

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To the Editor,

We read the recently published article by Kaicker S et al.¹ with great interest and would like to thank the authors for conducting this important and meaningful study. Whether coronavirus disease 2019 (COVID-19) vaccines impact platelet counts and bleeding in children, adolescents, and young adults (C-AYA) with preexisting immune thrombocytopenia (ITP) is unknown, which caused concerns among those families of children with preexisting ITP about vaccinating their children. Through a single-center studies of C-AYA with ITP, the authors reported that COVID-19 vaccination only had very limited effect on platelet counts and bleeding in C-AYA with ITP. They concluded that COVID-19 vaccination was safe for C-AYA with ITP. However, there are some points deserve further discussions to strengthen the worth of this article.

As the authors said, the best time to check platelet counts following COVID-19 vaccination has not been determined in adults, not to mention C-AYA. According to adult experience, the authors recommend checking platelet counts at baseline and a week after COVID-19 vaccination. However, Kuter DJ² reported that 12% of chronic ITP patients had a median platelet count drop of 96% within 2-5 days post COVID-19 vaccination, and most platelet counts was severe under $10 \times 10^9/L$ with new bleeding symptoms. According to this report, platelet counts within 2-5 days, not just one week or more, after COVID-19 vaccination seem to be necessary and should be advised to check in C-AYA with ITP to assess for the exacerbation of their possible thrombocytopenia.

Furthermore, the effect of vaccine types on C-AYA with ITP was not analyzed in this study. Only one child opted for the single dose Johnson & Johnson vaccine and subsequently received a Pfizer booster, all other received the Pfizer-BioNTech mRNA vaccine in this study. Lee EJ et al³ reported ITP occurred after vaccination with both the Pfizer and Moderna vaccines. Adverse event rate of platelet count decreases and bleeding in C-AYA with ITP among Moderna vaccine, Johnson & Johnson vaccine, AstraZeneca vaccine and other vaccines might be different with Pfizer vaccine. In addition, too small sample size and the single center

study might also affect the accuracy of the conclusion. A multi-center and large-scale study containing large sample size and different types of vaccines is needed to arrive at meaningful and accurate conclusions.

We appreciate Prof. Kaicker and his colleagues for this contribution. We believe the benefits of the vaccine outweigh the risks, but we hope our discussion with the authors will lead to a close surveillance and precise treatment for these special patients.

Author contributions

BY Chu wrote the manuscript and Y Qu revised the manuscript.

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None

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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