New findings regarding VITT after vaccination with the AstraZeneca Covid 19 vaccine

The dangerous antibodies, which cause cerebral vein thrombosis in rare patients after vaccination with the AstraZeneca vaccine disappear within three months. Researchers recommend to maintain three months between two vaccination shots of the AstraZeneca vaccine

Researchers of the department of Transfusion Medicine of the University Medicine Greifswald yesterday published in the New England Journal of Medicine new findings related to the rare severe thrombotic complications and thrombocytopenia (VITT) induced by the AstraZeneca Covid 19 vaccine.

“The dangerous anti-PF4 antibodies, which induced cerebral vein and other unusual thromboses after vaccination with the AstraZeneca Covid 19 vaccine, disappear in most patients within three months. Affected patients can be vaccinated a second time without recurrence of the antibodies” announced Dr. Andreas Greinacher. The Greifswald research team found evidence for the transience of these antibodies. The findings have major implications especially in countries who primarily use the AstraZeneca vaccine. The researchers recommend to maintain a time distance between the two vaccination shots of at least three months. This strongly reduces the risk that the second vaccination shot is given to an individual who has dangerous antibodies circulating. These antibodies might not cause clinical problems, but may cause thrombosis when the second vaccine dose is given while the antibodies are still present.

Dr. Linda Schönborn, first author of the study explains why these results are so important for affected patients and their families. “Physicians had been concerned that these antibodies might persist for many months or even years. The rapid decline of the pathogenic antibodies is a major relief for the patients and their families as the risk of thrombosis seems to disappear within weeks.” The second major consequence of the studies of the Greifswald group is highlighted by Dr. Thomas Thiele an expert in thrombosis and hemostasis and senior physician of the transfusion medicine department: “With the decline of antibodies we offered patients who suffered from VITT after the first vaccination dose, a second vaccine shot with an mRNA vaccine. In none of them the second vaccination shot induced recurrence of symptoms or any further complications”. This allows to provide these patients full vaccination protection. However, although likely, it is currently unknown, whether these patients might also tolerate a second vaccination shot with the AstraZeneca vaccine.

These findings of the Greifswald group build on the results of the research team who identified the mechanism and the underlying cause for the development of severe cerebral vein thrombosis after Covid 19 vaccination in March 2021 within days after recognition of the first patients. Vaccine-induced immune thrombotic thrombocytopenia VITT is caused by antibodies against platelet factor four which activate platelets and clotting system.

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Prof. Dr. Andreas Greinacher and his team are still researching vaccine side effects under high pressure.
Photo: UMG/Manuela Janke
Dr. Linda Schönborn is the first author of the publication.

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