

## Vakzin-induzierte thrombotische Thrombozytopenie – eine fehlgeleitete Immunreaktion

1. Althaus K, Marini I, Zlamal J, et al. Antibody-induced procoagulant platelets in severe COVID-19 infection. *Blood*. 2021;137(8):1061-1071.
2. Althaus K, Moller P, Uzun G, et al. Antibody-mediated procoagulant platelets in SARS-CoV-2-vaccination associated immune thrombotic thrombocytopenia. *Haematologica*. 2021;106(8):2170-2179.
3. Bourguignon A, Arnold DM, Warkentin TE, et al. Adjunct Immune Globulin for Vaccine-Induced Immune Thrombotic Thrombocytopenia. *N Engl J Med*. 2021;385(8):720-728.
4. Choi PY, Grace RF, Therese Ahlen M, et al. The SSC platelet immunology register of VITT and VIITP: Toward standardization of laboratory and clinical parameters. *J Thromb Haemost*. 2021;19(8):2094-2095.
5. Domi A, Feldmann F, Basu R, et al. A Single Dose of Modified Vaccinia Ankara expressing Ebola Virus Like Particles Protects Nonhuman Primates from Lethal Ebola Virus Challenge. *Sci Rep*. 2018;8(1):864.
6. Greinacher A, Langer F, Makris M, et al. Vaccine-induced immune thrombotic thrombocytopenia (VITT): Update on diagnosis and management considering different resources. *J Thromb Haemost*. 2022;20(1):149-156.
7. Greinacher A, Selleng K, Mayerle J, et al. Anti-platelet factor 4 antibodies causing VITT do not cross-react with SARS-CoV-2 spike protein. *Blood*. 2021;138(14):1269-1277.
8. Greinacher A, Thiele T, Warkentin TE, Weisser K, Kyrle PA, Eichinger S. Thrombotic Thrombocytopenia after ChAdOx1 nCov-19 Vaccination. *N Engl J Med*. 2021;384(22):2092-2101.
9. Handtke S, Wolff M, Zaninetti C, et al. A flow cytometric assay to detect platelet-activating antibodies in VITT after ChAdOx1 nCov-19 vaccination. *Blood*. 2021;137(26):3656-3659.
10. Huttner A, Dayer JA, Yerly S, et al. The effect of dose on the safety and immunogenicity of the VSV Ebola candidate vaccine: a randomised double-blind, placebo-controlled phase 1/2 trial. *Lancet Infect Dis*. 2015;15(10):1156-1166.
11. Huynh A, Kelton JG, Arnold DM, Daka M, Nazy I. Antibody epitopes in vaccine-induced immune thrombotic thrombocytopenia. *Nature*. 2021;596(7873):565-569.
12. Lee CSM, Selvadurai MV, Pasalic L, et al. Measurement of procoagulant platelets provides mechanistic insight and diagnostic potential in heparin-induced thrombocytopenia. *J Thromb Haemost*. 2022;20(4):975-988.
13. Michalik S, Siegerist F, Palankar R, et al. Comparative analysis of ChAdOx1 nCoV-19 and Ad26.COV2.S SARS-CoV-2 vector vaccines. *Haematologica*. 2022;107(4):947-957.
14. Nazy I, Sachs UJ, Arnold DM, et al. Recommendations for the clinical and laboratory diagnosis of VITT against COVID-19: Communication from the ISTH SSC Subcommittee on Platelet Immunology. *J Thromb Haemost*. 2021;19(6):1585-1588.
15. Pavord S, Scully M, Hunt BJ, et al. Clinical Features of Vaccine-Induced Immune Thrombocytopenia and Thrombosis. *N Engl J Med*. 2021;385(18):1680-1689.
16. Rizk JG, Gupta A, Sardar P, et al. Clinical Characteristics and Pharmacological Management of COVID-19 Vaccine-Induced Immune Thrombotic Thrombocytopenia With Cerebral Venous Sinus Thrombosis: A Review. *JAMA Cardiol*. 2021;6(12):1451-1460.
17. Sachs UJ, Cooper N, Czwalińska A, et al. PF4-Dependent Immunoassays in Patients with Vaccine-Induced Immune Thrombotic Thrombocytopenia: Results of an Interlaboratory Comparison. *Thromb Haemost*. 2021;121(12):1622-1627.
18. Sanchez van Kammen M, Heldner MR, Brodard J, et al. Frequency of Thrombocytopenia and Platelet Factor 4/Heparin Antibodies in Patients With Cerebral Venous Sinus Thrombosis Prior to the COVID-19 Pandemic. *JAMA*. 2021;326(4):332-338.
19. Schultz NH, Sorvoll IH, Michelsen AE, et al. Thrombosis and Thrombocytopenia after ChAdOx1 nCoV-19 Vaccination. *N Engl J Med*. 2021;384(22):2124-2130.
20. Scully M, Singh D, Lown R, et al. Pathologic Antibodies to Platelet Factor 4 after ChAdOx1 nCoV-19 Vaccination. *N Engl J Med*. 2021;384(23):2202-2211.
21. Scutelnic A, Krzywicka K, Mbroh J, et al. Management of Cerebral Venous Thrombosis Due to Adenoviral COVID-19 Vaccination. *Ann Neurol*. 2022;92(4):562-573.
22. Singh A, Toma F, Uzun G, et al. The interaction between anti-PF4 antibodies and anticoagulants in vaccine-induced thrombotic thrombocytopenia. *Blood*. 2022;139(23):3430-3438.

23. Thiele T, Ulm L, Holtfreter S, et al. Frequency of positive anti-PF4/polyanion antibody tests after COVID-19 vaccination with ChAdOx1 nCoV-19 and BNT162b2. *Blood*. 2021;138(4):299-303.
24. Uzun G, Althaus K, Bakchoul T. No Correlation between Anti-PF4 and Anti-SARS-CoV-2 Antibodies after ChAdOx1 nCoV-19 Vaccination. *N Engl J Med*. 2021;385(14):1334-1336.
25. Uzun G, Pelzl L, Singh A, Bakchoul T. Immune-Mediated Platelet Activation in COVID-19 and Vaccine-Induced Immune Thrombotic Thrombocytopenia. *Front Immunol*. 2022;13:837629.
26. Vercruyse K, Devreese KMJ. Laboratory testing for post ChAdOx1 nCoV-19 vaccination VITT: A challenge. Comment on: Recommendations for the clinical and laboratory diagnosis of VITT against COVID-19: Communication from the ISTH SSC Subcommittee on Platelet Immunology. *J Thromb Haemost*. 2021;19(9):2355-2357.
27. Waqar U, Ahmed S, Gardezi S, et al. Thrombosis with Thrombocytopenia Syndrome After Administration of AZD1222 or Ad26.COV2.S Vaccine for COVID-19: A Systematic Review. *Clin Appl Thromb Hemost*. 2021;27:10760296211068487.
28. Wolf ME, Luz B, Niehaus L, Bhogal P, Bazner H, Henkes H. Thrombocytopenia and Intracranial Venous Sinus Thrombosis after "COVID-19 Vaccine AstraZeneca" Exposure. *J Clin Med*. 2021;10(8).
29. Zlamal J, Althaus K, Jaffal H, et al. Upregulation of cAMP prevents antibody-mediated thrombus formation in COVID-19. *Blood Adv*. 2022;6(1):248-258.
30. [https://gth-online.org/wp-content/uploads/2021/04/Algorithmus-HIT-VIPIT-Version-5\\_04a.pdf](https://gth-online.org/wp-content/uploads/2021/04/Algorithmus-HIT-VIPIT-Version-5_04a.pdf).