Those suffering from autoimmune diseases require a third coronavirus vaccination

Many patients suffering from an autoimmune disease such as rheumatism, ulcerative colitis or psoriasis have to take medicine that affects their immune system. As the immune system also determines the effectiveness of vaccinations, several of those suffering from autoimmune diseases wonder whether it is safe for them to be vaccinated against SARS-CoV-2 without incurring any complications as a direct result of the vaccine, and whether the vaccine will be just as effective and offer them protection for the same period as time as healthy people.

A large study at the Deutsches Zentrum für Immuntherapie (DZI, speaker Prof. Dr. Markus F. Neurath and Prof. Dr. med. Univ. Georg Schett) at Universitätsklinikum Erlangen has looked at this important issue in detail. The results have recently been published in the journal “The Lancet Rheumatology”.

In the prospective study, the interdisciplinary research team from DZI investigated a total of more than 3,700 patients and healthy participants who have received either two or three vaccines against coronavirus. The results allay the fears of those suffering from autoimmune diseases. Most of those who had the vaccination did not report any significant side effects, with no difference between the healthy participants and those suffering from autoimmune diseases. In addition, the majority of patients created antibodies to protect them against coronavirus. Another interesting and very important result is that generally speaking, people with autoimmune diseases generally have a weaker immune response after two vaccinations against coronavirus and their vaccine protection generally wanes faster in comparison to the control group.

“Age and certain treatments can lead to the immune response in patients with autoimmune diseases waning faster than in others,” emphasizes PD Dr. David Simon from Department of Medicine 3 – Rheumatology and Immunology (director: Prof. Dr. med. Univ. Georg Schett) from Universitätsklinikum Erlangen, who led the study. Specifically, the study determined that “older patients lose their immune protection after the coronavirus vaccine faster than younger patients.” His colleague Dr. (TR) Koray Tascilar continues, “some medications that aim specifically at certain immune cells such as T and B cells seem to reduce the effectiveness of the short and long-term immune response. It is therefore probable that this group in particular would benefit from a third vaccination soon after the second.”

The study also indicated that the immune protection increased considerably in patients with autoimmune diseases who had a booster vaccination. “Individual booster vaccinations definitely make sense!” concludes Prof. Schett. “Adjusting vaccination schedules and offering an earlier booster vaccination may provide those suffering from autoimmune diseases with better protection.”

The study was conducted at the Deutsches Zentrum Immuntherapie at Universitätsklinikum Erlangen, led by Prof. Schett, Prof. Neurath, Prof. Dr. Carola Berking (director of the Department of Dermatology) and Prof. Dr. Michael Sticherling (deputy director of the Department of Dermatology). The researchers received funding from the Free State of
Bavaria, the Schreiber Foundation and the German Research Foundation (Collaborative Research Centre 1181; DFG-FOR2886).

wissenschaftliche Ansprechpartner:
Prof. Dr. med. univ. Georg Schett
Phone: +49 9131 85 39109
georg.schett@uk-erlangen.de

Originalpublikation:
10.1016/S2665-9913(22)00191-6