Swisstransplant
Effingerstrasse 1 | Postfach | 3011 Bern
T +41 58 123 80 00 | www.swisstransplant.org | info@swisstransplant.org

COVID-19 vaccination in solid organ transplant candidates and solid organ transplant recipients – an update (Berne, 23.11.2021)

In Switzerland, currently two mRNA based SARS-CoV-2 vaccines (Spikevax®, Moderna / Comirnaty®, Pfizer/BioNTech) and one vector based vaccine (COVID-19 Vaccine Janssen®, Janssen-Cilag) are approved.

The currently approved mRNA based SARS-CoV-2 vaccines are more immunogenic in solid-organ transplant recipients compared to the vector-based vaccine (1). We therefore encourage immunization with an mRNA based vaccine and the following recommendations exclusively relate to mRNA based SARS-CoV-2 vaccines that are presently licensed in Switzerland.

We encourage immunization of patients awaiting solid organ transplantation and of solid organ transplant recipients. In the post transplantation setting, the immune response to SARS-CoV-2 vaccines is reduced (2-6). Current evidence suggest that an additional third dose might enhance the immunogenicity of the vaccine in solid organ transplant recipients (7-11). We advise to follow the recommendations published by the Federal Office of Public Health and the «Eidgenössischen Kommission für Impffragen, EKIF» and to administer three doses of an mRNA vaccine with a minimal interval of 4 weeks between each dose. Vaccine intervals can be extended for logistic reasons (there is no maximal interval). In SARS-CoV-2 infection experienced transplant recipients, two doses of an mRNA vaccine elicit similar antibody responses compared to healthy individuals without previous infection who were vaccinated with two vaccine doses (1). We therefore recommend administering two doses of an mRNA vaccine if transplant recipients had confirmed COVID-19 before vaccination.

Currently, there is no data on the safety, tolerability and immunogenicity regarding the administration of a fourth vaccine dose to solid organ transplant recipients.

The ideal timing of vaccination is uncertain. We recommend delaying vaccination at least one month from transplant surgery and 3 months from use of T-cell or B-cell depleting agents; primarily for reasons of expected reduced efficacy and less for safety concerns. In the pre transplant setting, we recommend vaccination for all patients on the waiting list. In case of urgent listing of severely ill patients (e.g. acute liver failure) the decision for or against immediate vaccination should be taken on an individual case basis.

Anti-spike antibody concentrations may be measured four weeks after the last vaccine dose. However, we would like to highlight that there are no established cut-offs of anti-spike antibody concentrations for protection. We still recommend to solid organ transplant recipients to continue protective measures after being vaccinated.

We encourage the early use of monoclonal antibody therapy in patients with low or absent antibody titers in case of an infection irrespective of the number of previous vaccinations (12). Details about monoclonal antibody therapies are available at the FOPH homepage.

Recommendation approved by Dr Cédric Hirzel, President Swisstransplant Working Group of Infectious Diseases, and PD Franz Immer, Medical Director and CEO Swisstransplant

swiss transplant
Swisstransplant
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