

Current recommendations of the German Society for Rheumatologie (DGRh) for the management of patients with inflammatory rheumatic diseases during the SARS-CoV-2/Covid 19 pandemic

The German Society for Rheumatology (DGRh) wants to provide help to address special concerns in the care of patients with inflammatory rheumatic diseases/systemic autoimmune diseases in view of the current threat of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

So far, there are no evidence-based data for recommendations for the care and treatment of patients with rheumatic diseases in connection with the SARS-CoV-2/Covid-19 pandemic. In particular, this concerns the specific effects of the infection of patients with inflammatory rheumatic diseases and the influence of immunosuppressive or immunomodulating antirheumatic drugs on the infection. Accordingly, the following recommendations are based on an expert consensus prepared by the DGRh. It is based on analogies to the procedures for other, longer known viral infections, on theoretical considerations and on previously known data and facts about the SARS-CoV-2 infection. It is understood that in each individual case a deviation from these recommendations can be useful. In addition, the facts about the further development of the infection as well as new therapeutic developments should be followed carefully, as changes to these consensus recommendations can always result from this.

1. Prevention of infections

- The measures described by the German Robert Koch Institute (RKI) for the general population and for persons at particular risk that are updated daily apply.
- Under certain conditions, patients with inflammatory rheumatic diseases have an increased risk of infection (Table 1). Whether this also applies to SARS-CoV-2 infections is not known. Whether COVID-19 is more severe in patients with an inflammatory rheumatic diseases than in persons without a rheumatic disease is not known, nor is the answer to the question whether immunosuppressive drug therapy represents an additional risk for a severe course. Patients with inflammatory rheumatic diseases should therefore consistently follow recommendations to avoid contacts to other individuals. This also includes discussing with the employer to which extent contact avoidance at the workplace can be implemented. Patients can be issued with a certificate that they are receiving immunosuppressive/immunomodulating therapy, with which they can contact physicians in charge for their companies / public health officers / employers.
- Contact between SARS-CoV-2 infected persons and rheumatologists, or between infected persons and rheumatological care facilities should be avoided until the infection has subsided (usually >14 days after the end of symptoms).
- Necessary controls for therapy and disease monitoring should be ensured, but in individual cases, the risk of (primary care as well as rheumatology) doctor visits must be weighed against the risk of missing controls. For example, in patients with a stable disease state and with therapy that has already been running successfully for some time, temporarily longer monitoring intervals may be considered to avoid contact. The treatment of the SARS-CoV-2 infection itself should be performed and controlled by the primary care physician (mild cases), an infectious disease specialist, a pneumologist or, if necessary, an intensive care physician (severe cases), with the rheumatologist being available for consultation.

2. Anti-rheumatic drug therapy in the context of the current COVID-19 pandemic

A general pause or reduction of immunosuppression is not recommended, as the pandemic is expected to last longer and immunosuppressed patients would be at increased risk of relapse if therapy is reduced or immunosuppression is discontinued. Such a relapse or a flare of the underlying rheumatic disease increases the risk of infection (see Table 1). On the other hand, this destabilisation of disease control may lead to the necessity of intensifying the immunosuppressive therapy again (and possibly beyond the original level). Immunosuppressive therapies for remission induction (e.g. for vasculitis and others) should not be delayed or underdosed, whereby established therapy regimes with lower glucocorticoid (GC) doses should be preferred. Hydroxychloroquine (HCQ) should not be discontinued as this may be more beneficial than harmful in the COVID-19 infection.

The following specific recommendations are given:

2.1. Patients without signs of infection

- Immunosuppressive and/or DMARD therapies used to maintain remission should not be discontinued or reduced in dose solely for fear of SARS-CoV-2 infection. However, dose reductions of GC may be considered in individual cases if the setting remains stable.
- The dosages of immunosuppressive drugs or DMARDs should be carefully checked as usual and corrected if necessary. This also applies to dose adjustments recommended in the product information, for example in leukopenia.

2.2 Patients with COVID-19 contact but without signs of infection

- Continue therapy as described in point 2.1.

2.3 Patients with COVID-19 contact and symptoms of an infection

- A test for SARS-CoV-2 should be taken.
- In case of mild symptoms and without fever: no change in therapy.
- In case of significant signs of infection and especially fever ($>38^{\circ}\text{C}$), pause anti-rheumatic medication.
- Any long-term GC therapy should be continued at the same dose.

2.4. Patients tested positive for SARS-CoV-2 but without signs of infection

- Pausing or delaying ts- or bDMARD therapy for the mean incubation period of the virus should be considered. As it frequently not known then the infection may have occurred, a delay of 5-6 days after the smear has been taken should be considered.
- Any continuous GC therapy should be continued at the same dose.
- csDMARDs should not be discontinued.

2.5. Patients positive for SARS-CoV-2 tested with symptoms

- Pausing the antirheumatic medication.
- Any long-term GC therapy should be continued at the same dose.

3. Supportive measures (all patient groups)

- In line with the recommendations of the German National Vaccination Committee (STIKO), the vaccination status should be updated (focus on pneumococci, influenza).
- A PjP prophylaxis should be carried out if indicated (especially CYC, GC $>15\text{mg}$ prednisolone equivalent).

Table 1: Important basic risk factors for an infection in patients with inflammatory rheumatic diseases

- Higher age
- Multimorbidity, especially pre-existing lung disease, diabetes mellitus
- History of previous serious infections (e.g. sepsis)
- Long-term therapy with glucocorticoids, especially ranging from 5 mg/day and above (risk increases with the long-term dose)
- Therapy with DMARDs and other immunosuppressive drugs (exceptions: hydroxychloroquine, sulfasalazine)
- High activity of the underlying rheumatic disease
- Current cyclophosphamide therapy or therapy less than 8 weeks ago
- Acquired and congenital immunodeficiencies, in particular:
 - Immunoglobulin deficiency <4g/dl IgG
 - Lymphopenia below 500/ul, CD4 cells below 200/ul

These recommendations were published by the Commission for Pharmacotherapy and the Board of the German Society for Rheumatology e.V. (Status 24.03.2020).