Rheumatic diseases during COVID-19 pandemics: When patients with rheumatic diseases encounter SARS-COV-2

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Abstract

The effects of the coronavirus disease 19 (COVID-19) pandemic on patients with rheumatic diseases are still under study [1]. In COVID-19, initial inflammatory response is seen as increased levels of TNF-alpha, IL-1 beta, and IL-6 [2]. IL-6 can be associated with prolonging QT interval that may lead to torsade de pointes [3], predict poor outcomes [4], and increase concerns about hydroxychloroquine use [5].

Uncontrolled rheumatoid arthritis and systemic lupus erythematosus (SLE) have a higher risk of acquiring infection than being on immunosuppressive regimen while the disease is in remission [6]. Previous intake of immunosuppressants before admission to hospital did not seem to influence the severity of infection in patients with SLE [7]. There is currently no clear evidence on the potential risks or benefits to continue or stop the background therapy in patients with COVID-19 [8]. However, the unjustifiable preventive withdrawal of background therapy could lead to an increased risk of relapses and morbidity from the chronic rheumatological condition [9]. Disease flares and the increasing use of corticosteroids during disease flares can further increase the risk of infection. The data from the COVID-19 Global Rheumatology Alliance provider registries, a cohort that included patients from 40 countries, showed that moderate-to-high dose glucocorticoids, old age (>65 years), hypertension, lung disease and diabetes mellitus were associated with an increased risk of hospitalization [1]. Corticosteroid use might be associated with an increased mortality. However, if infection occurs, corticosteroid therapy should not be stopped abruptly because of the risk of adrenal insufficiency [8]. It should be important to seek a minimum effective dose of oral corticosteroids ≤ 10 mg prednisolone per day in the usual treatment [1, 8].

Biologic disease modifying anti-rheumatic drugs used in patients with rheumatic diseases may have an impact on COVID-19. Protective effect of TNF inhibitors on poor outcomes was found [1]. Preliminary data show that tocilizumab improved the clinical outcome in severe and critical COVID-19 patients [10]. To treat the cytokine storm caused by infection, anti-cytokine therapies including tocilizumab, anakinra, and JAK inhibitors are being tried [2].

References

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