## **CORRESPONDENCE**





## COVID-19, rheumatic diseases and immunosuppressive drugs: an appeal for medication adherence

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Dear Editor,

The novel coronavirus (SARS-CoV-2) outbreak has raised concerns among patients on chronic immunosuppressive therapy because of immune response to virus perceived to be lowered, possibly fuelling non-adherence behaviour. Indeed, high frequency of infection has been observed in patients with rheumatic diseases. Despite immunosuppressive agents and impaired immune function had been associated with increased risk of infection [1, 2], it must be remembered that uncontrolled disease activity is among the most sensitive and specific independent predictors.

To put research into context, for rheumatoid arthritis patients it has been estimated that each 0.6 unit increase in Disease Activity Score on 28 joints (DAS28) score corresponds to a 4% increased rate of outpatient infections and a 25% increased rate of infections requiring hospitalisation [3]. Similarly, those with systemic lupus erythematosus (SLE) and SLE Disease Activity Index (SLEDAI) > 4 have 71.5% higher odds of outpatient infection [4].

Early in a pandemic, there is the paramount duty to encourage and optimize patient medication adherence to prevent arbitrary treatment discontinuation and consequent disease flare leading to an increase of infection risk.

As a compelling argument in favour of medication adherence, it should be noted that some of the most administered drugs, particularly chloroquine and hydroxychloroquine, have well-known antiviral effects [4], being also effective and acceptably safe for treating SARS-CoV-2-related pneumonia, as the results of Chinese clinical trials have recently shown [5].

At this time, there is a lack of information about the impact of SARS-CoV-2 on patients with autoimmune diseases. In the absence of such data, which we all need to be published as soon as possible, patients should rely on basic personal prevention procedures and common sense, whereas clinicians should advocate against arbitrary discontinuation of immunosuppressive agents by patients themselves unless symptomatic and upon medical advice only.

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## **Compliance with ethical standards**

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## References

- 1. Iannone F, Cantini F, Lapadula G (2014) Diagnosis of latent tuberculosis and prevention of reactivation in rheumatic patients receiving biologic therapy: international recommendations. J Rheumatol Suppl 91:41–46. https://doi.org/10.3899/jrheum.140101
- Barrett O, Abramovich E, Dreiher J, Novack V, Abu-Shakra M (2017) Short- and long-term mortality due to sepsis in patients with rheumatoid arthritis. Rheumatol Int 37(6):1021-1026. https ://doi.org/10.1007/s00296-017-3694-5
- Au K, Reed G, Curtis JR, Kremer JM, Greenberg JD, Strand V, Furst DE, Investigators C (2011) High disease activity is associated with an increased risk of infection in patients with



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- rheumatoid arthritis. Ann Rheum Dis 70(5):785–791. https://doi.org/10.1136/ard.2010.128637
- Danza A, Ruiz-Irastorza G (2013) Infection risk in systemic lupus erythematosus patients: susceptibility factors and preventive strategies. Lupus 22(12):1286–1294. https://doi.org/10.1177/09612 03313493032
- Colson P, Rolain JM, Lagier JC, Brouqui P, Raoult D (2020) Chloroquine and hydroxychloroquine as available weapons to fight

COVID-19. Int J Antimicrob Agents. https://doi.org/10.1016/j.ijantimicag.2020.105932

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