

What about rheumatic diseases and COVID-19?

H. A. Aouissi¹ and I. Belhaouchet²

1) Scientific and Technical Research Centre on Arid Regions, Biskra, Algeria and 2) Centre Hospitalier de Soissons, Service d'Hepato-gastro-entérologie, Soissons, France

Keywords: COVID-19, epidemiology, infection, rheumatology, virus

Original Submission: 19 January 2021; **Revised Submission:** 27 January 2021; **Accepted:** 2 February 2021

Article published online: 12 February 2021

Corresponding author: H. Amir Aouissi, Scientific and Technical Research Centre on Arid Regions (CRSTRA), Campus Mohamed Kheider, BP 1682, El Alia, Biskra, 07000, Algeria.
E-mails: hani.amir.aouissi@crstra.dz, aouissi.amir@gmail.com

To the editors

Based on the WHO situation report of 26 January 2020, coronavirus disease 2019 (COVID-19) has been confirmed in nearly 99 million patients in more than 200 countries and there have been 2 million related deaths around the world [1]. For comparison, in Algeria, there have been 106 097 cases and 2871 related deaths [2].

The large majority of patients presented with fever, fatigue and dry cough; the higher case fatality rate has mainly been noted in older patients with co-morbidities (e.g. diabetes, hypertension, cancer, and cardiovascular and chronic respiratory diseases) [3]. An individual with sudden onset ageusia or anosmia without the presence of other cause is also identified as a potential case of COVID-19 [1].

So far, it would appear that none of the deaths have been directly associated with rheumatic diseases. Approximately 10% of the Algerian population (more than 4.2 million inhabitants) have at least one autoimmune disease, and 7% of the population (more than 3 million people) have autoimmune rheumatic diseases [4]. Patients with rheumatic disease are known to have an increased risk of infection, generally attributed to the overall degradation of the immune system [5].

Since the beginning of the epidemic, chloroquine and hydroxychloroquine were the best-known drugs used, and showed

powerful *in vitro* antiviral effects in a coronavirus test by increasing endosomal pH, which is necessary for virus–cell fusion, in addition to interfering with glycosylation of cellular receptors [6]. It is also known to have an immune-modulating action. Studies have continued to multiply, some have shown very interesting results, and others have claimed that it is ineffective and dangerous [7]. It remains the protocol used in Algeria [8].

There is currently no compelling and irrevocable substantiation that patients with rheumatic diseases are more at risk with regards other co-morbidities [9].

Further detailed investigations should be carried out to best characterize COVID-19. However, the experience and knowledge gained from dealing with other existing infectious diseases and the results of therapies used on patients with rheumatological disease suggest that there is an increased probability for this community to acquire severe acute respiratory syndrome coronavirus 2 [10].

Currently, WHO provides the same guidance as at the beginning of the pandemic. They advise the general population to take the same preventive measures as against influenza and related infectious diseases. These recommendations can be summed up as: frequent hand washing; social distancing (approximately 2 m between individuals); wearing a mask; avoiding touching the face; and sneezing or coughing into the elbow. If there is onset of fatigue, significant fever and a cough then it is also important to be examined by a doctor.

The situation we are experiencing can be described as unique and unexpected; this pandemic highlights the weaknesses of medical systems around the world and the knowledge gaps which face us on a daily basis. More than ever we need massive collaboration from all medical branches (including rheumatology). Indeed, the rheumatologist as one of the front line workers should always consider other options whenever a patient comes with common rheumatic manifestations to try to limit possible transmission of the virus.

Authors' contributions

HAA conceived, drafted, revised and approved the manuscript; IB drafted, revised and approved the manuscript.

Funding

The DGRSDT and the MESRS finance all our research work and provide us the necessary tools.

Conflicts of interest

The authors declare that there are no conflicts of interest.

Acknowledgements

This article is dedicated to the memory of the Mrs Zoubida Zaidi, who passed away before we finished this paper and to whom we address all our thanks for her help, advice and availability despite the conditions. We are grateful to the DGRSDT and the MESRS for their involvement and for providing funding.

References

- [1] World Health Organization. Novel coronavirus (2019-nCoV) situation reports. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>. [Accessed 27 January 2021].
- [2] Ababsa M, Aouissi HA. Current state of the coronavirus (Covid-19) in Algeria. *J Community Med Health Care* 2020;5:1036. Available from: <https://doi.org/10.26420/jcommunitymedhealthcare.2020.1036>.
- [3] Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *JAMA* 2020;323:1239–42.
- [4] Office National de la Santé. Available from: <https://www.ons.dz>. [Accessed 27 January 2021].
- [5] Favalli E, Ingegnoli F, De Lucia O, Cincinelli G, Cimaz R, Caporali R. COVID-19 infection and rheumatoid arthritis: faraway, so close! *Autoimm Rev* 2020:102523.
- [6] Wang M, Cao R, Zhang L, Yang X, Liu J, Xu M, et al. Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. *Cell Res* 2020;30:269–71.
- [7] Saqrane S, El Mhammedi MA. Review on the global epidemiological situation and the efficacy of chloroquine and hydroxychloroquine for the treatment of COVID-19. *New Microbes New Infect* 2020;35:100680.
- [8] Aouissi HA. Hydroxychloroquine in the fight against COVID-19—hydroxychloroquine dans la lutte contre la covid-19. *Maghrebien J Pure Appl Sci* 2020;6(2):65–72.
- [9] Guan W, Ni Z, Yuhu W, Liang C, Ou C, He J, et al. Clinical characteristics of coronavirus disease 2019 in China. *N Engl J Med* 2020;382:1708–20.
- [10] Orisakwe OE, Orish CN, Nwanaforo EO. Coronavirus disease (COVID-19) and Africa: acclaimed home remedies. *Sci Afr* 2020;10:e00620.