Are patients with systemic lupus erythematosus at increased risk for COVID-19?

The global health emergency generated by the SARS-CoV-2 outbreak has complicated the management of patients with comorbidities, which together with old age seem to be the strongest predictor of mortality from COVID-19.[1] We read with great interest the letter published by Mathian and colleagues about the clinical course of COVID-19 in patients with systemic lupus erythematosus (SLE) treated with hydroxychloroquine.[2] Their preliminary data seem to suggest a particularly high incidence of severe and even fatal cases of infection, confirming that, despite ongoing treatment with antimalarial drugs, patients with SLE have a high risk of unfavourable course during the current pandemic.

The critical point that remains to be clarified at present is the real incidence of COVID-19 in patients with SLE, regardless of the current treatment. Being operative in the maximum epicentre of the outbreak in Italy (Milan, Lombardy), we have had to face in these weeks the emergency related to the management of such a fragile population and we have tried to obtain from our cohort of patients information useful to solve the outstanding issues. In particular, between 25 February and 10 April we circulated a survey that explored the frequency of nasopharyngeal swabs positive for COVID-19, the onset of suspicious symptoms due to viral infection (fever >37.5°C, cough, dyspnoea) and the impact of the pandemic on the behaviour and treatment of our patients. The survey was administered face to face to all patients who attended an outpatient visit or by telephone to those who missed a scheduled visit during the period under examination. The study population encompassed more than 900 patients, including 62 (91% females, mean age 44.1 years) with SLE and a mean disease duration of 12.6 years. About half of the patients (51.6%) were treated with biological drugs (26 belimumab and 6 rituximab), 30 (48.3%) were receiving hydroxychloroquine while another 20 were taking another conventional synthetic disease-modifying drug (7 methotrexate, 11 mycophenolate, 2 azathioprine). Forty-six (74.6%) also took corticosteroids (28 at a dose greater than 5 mg/day). No cases of nasopharyngeal swab positivity were observed, while eight patients (including five on hydroxychloroquine) reported symptoms consistent with a viral infection, rapidly resolving without specific treatment. Only three patients reported contact with confirmed cases of COVID-19 and none of them developed suspicious symptoms. None of the patients changed their current rheumatological therapy and 93.5% defined their disease as stable during the entire period under review. Overall, therefore, the impact of COVID-19 in our patients with SLE was very low, in line with the low burden we observed in the rest of our cohort with inflammatory arthritis.[3] The adoption of strict rules for the prevention of contagion, such as the use of face masks, homeworking and social distancing, was reported by almost all patients (95%). This approach, likely induced by the rheumatic disease itself, has probably played a decisive role in reducing the incidence of COVID-19 among our patients.[4] Noteworthy, the majority of patients included had a long-term disease and were therefore already used to adopt measures to minimise the infectious risk before the COVID-19 outbreak.

In conclusion, our preliminary data, although still limited in number, do not seem to suggest an increased risk of SARS-CoV-2 infection for patients with SLE. Therefore, while considering the severe course of COVID-19 reported in SLE, our data support rheumatologists in encouraging patients to maintain the ongoing treatment to avoid dangerous flare-ups of the disease and to strictly enforce the rules for prevention of infection.

Ennio Giulio Favalli ,[1] **Maria Gerosa**,[1,2] **Antonella Murgo**,[1] **Roberto Caporali**[1,2]

[1]Division of Clinical Rheumatology, Gaetano Pini-CTO, Milano, Lombardia, Italy
[2]Department of Clinical Sciences and Community Health, Research Center for Adult and Pediatric Rheumatic Diseases, Università degli Studi di Milano, Milano, Lombardia, Italy

Correspondence to Dr Ennio Giulio Favalli, Division of Clinical Rheumatology, Gaetano Pini-CTO, Milano 20122, Lombardia, Italy; ennio.favalli@gmail.com

Contributors All the authors collected data. EGF made the statistical analysis and drafted the manuscript. MG, AM and RC drafted and revised the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Ethics approval The current analysis is part of a project to collect observational data from rheumatological patients followed at the ASST Gaetano Pini-CTO. The project was approved by the Ethics Committee of the Gaetano Pini Institute with approval number 141/2010. All included patients have signed an informed consent to participate in the data collection.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Favalli EG, Gerosa M, Murgo A, *et al*. *Ann Rheum Dis* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/annrheumdis-2020-217787

Received 29 April 2020
Accepted 1 May 2020

Linked

► http://dx.doi.org/10.1136/annrheumdis-2020-217859

Ann Rheum Dis 2020;**0**:1. doi:10.1136/annrheumdis-2020-217787

ORCID iD
Ennio Giulio Favalli http://orcid.org/0000-0003-1471-6467

REFERENCES

1 Richardson S, Hirsch JS, Narasimhan M, *et al*. Presenting characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in the new York City area. *JAMA* 2020;323. doi:10.1001/jama.2020.6775. [Epub ahead of print: 22 Apr 2020].
2 Mathian A, Mahevas M, Rohmer J, *et al*. Clinical course of coronavirus disease 2019 (COVID-19) in a series of 17 patients with systemic lupus erythematosus under long-term treatment with hydroxychloroquine. *Ann Rheum Dis* 2020:annrheumdis-2020-217566.
3 Favalli EG, Ingegnoli F, Cimaz R, *et al*. What is the true incidence of COVID-19 in patients with rheumatic diseases? *Ann Rheum Dis* 2020. doi:10.1136/annrheumdis-2020-217615. [Epub ahead of print: 22 Apr 2020].
4 Feng S, Shen C, Xia N, *et al*. Rational use of face masks in the COVID-19 pandemic. *Lancet Respir Med*;S2213-2600:30134-X.