Impact of the COVID-19 lockdown on the management and control of patients with GCA

We read with interest the letter by Monti *et al*[1] reporting that patients with chronic arthritis treated with disease-modifying antirheumatic drugs do not seem to be at increased risk for severe complications from COVID-19. However, the indirect complications linked to the COVID-19 epidemic and the resulting lockdown must also be considered. This unprecedented situation has caused significant physical and psychological stress in many individuals. Previous studies have suggested that inflammatory rheumatic diseases are related to physiological stress[2 3]; we therefore assessed the impact of the COVID-19 lockdown on treatment adherence and disease stability in patients with giant cell arteritis (GCA). In this chronic inflammatory vasculitis, the duration and adherence to treatment (mainly glucocorticoids) are major factors in disease control and relapse prevention.[4 5]

A cross-sectional phone survey was conducted during the lockdown in 79 patients with GCA (n=79) living at home and who have been followed up at the Dijon University Hospital since January 2018. Three trained interviewers used a standardised questionnaire to collect data by phone between 14 and 30 April 2020, that is, 4 weeks into the French lockdown, which started on 17 March 2020. If patients reported signs suggesting GCA activity, another interviewer conducted a second interview to ascertain recent GCA symptoms.

Among the 79 patients included, 74 were interviewed (4 lost to follow-up, 1 declined). Table 1 summarises the characteristics of the study population and shows the impact of lockdown on the activity and monitoring of GCA and the effect on patients' lifestyle. All patients stated compliance with the lockdown rules, and 22 (29%) patients reported being in poorer general condition than before the COVID-19 crisis. In addition, 24 (32%) patients reported feeling significantly more stressed since the beginning of lockdown. In terms of lifestyle, 50% reported a reduction in physical activity. Only one-third implemented alternative physical activity, while 42% increased the time spent in front of digital screens. The only patient who smoked increased his tobacco consumption, and five (7%) patients increased their alcohol consumption. Finally, 16% of patients reported gaining 2 kg of weight or more.

Regarding the monitoring of GCA, 25% of patients who had scheduled blood tests did not attend the appointment (seven following the advice of their doctor, seven for fear of contamination and one for another reason). Forty-one (55%) patients had a scheduled medical consultation during lockdown. Twenty-one (50%) patients cancelled the appointment, 10 attended an inperson consultation and 10 had a teleconsultation. In contrast, patients reported strong therapeutic adherence, particularly to glucocorticoids, despite the alarming and repeated messages broadcast in various media that these medications could result in more severe forms of COVID-19. In fact, none of the patients had discontinued current treatment on their own even though 32% reported significant anxiety about their risk of infection. While adherence to treatment was strong, seven (9.5%) patients reported signs suggesting a flare of GCA after the start of lockdown. Two (29%) of these patients were no longer treated and five (71%) were still being treated. We could hypothesise that this unusual relapse rate might be the result of a change in lifestyle (increased inactivity) associated with significant psychosocial stress. In addition, lockdown had a negative impact on lifestyle, leading to an increase in unhealthy behaviours with a rapid decrease in physical activity (ie, after 4 weeks). If another period of lockdown becomes necessary, the impact of a prolonged sedentary lifestyle on the autonomy of this fragile population should be considered.

In conclusion, this study highlights the negative impact of the COVID-19 lockdown on the management and control of a chronic disease and on the lifestyle of a representative sample of patients with GCA confined to their homes.

Table 1 Characteristics of patients with GCA and their medical and lifestyle parameters

Demographic characteristics	
Age, mean±SD	77.3±7.5
Female, n (%)	56/74 (76)
Male, n (%)	18/74 (24)
Treatment of GCA, n (%)	
Glucocorticoid	33/74 (45)
Methotrexate	2/74 (3)
Tocilizumab	1/74 (1)
No treatment	31/74 (42)
General parameters, n (%)	
Decrease in general condition	22/74 (29)
Anxiety	24/74 (32)
Medical parameters, n (%)	
Relapse of GCA	7/74 (9.5)
Untreated patient	2/7 (29)
Treated patient	5/7 (71)
Scheduled biological tests	60/74 (81)
Carried out	45/60 (75)
Cancelled for fear of contamination	7/60 (12)
Cancelled on medical advice	7/60 (12)
Cancelled for some other reason	1/60 (1)
Patients who stopped their treatment	0/74 (0)
Planned medical consultation during the lockdown	41/74 (55)
Cancelled	21/41 (52)
Maintained	10/41 (24)
Teleconsultation	10/41 (24)
Lifestyle parameters, n (%)	
Physical activity	
>25% decrease	37/74 (50)
No change	33/74 (45)
>25% increase	4/74 (1)
Replacement physical activity	12/37 (32)
Smoking increase (>25%)	1/1 (100)
Alcohol consumption increase (>2 daily glasses)	5/74 (7)
Body weight increase (>2 kg)	12/74 (16)
Increased the time spent in front of screens	31/74 (42)

GCA, giant cell arteritis.

Roman Praliaud,[1] Helene Greigert,[1] Maxime Samson ,[1,2] Marianne Zeller,[3] Mathieu Boulin,[4] Philip Bielefeld,[1] André Ramon,[5] Yves Cottin,[3] Bernard Bonnotte [1,2]

[1]Department of Internal Medicine and Clinical Immunology, University Hospital Centre Dijon, Dijon, France
[2]INSERM, EFS BFC, UMR1098, RIGHT Interactions Greffon-Hôte-Tumeur/Ingénierie Cellulaire et Génique, University of Bourgogne Franche-Comté, Dijon, France
[3]Department of Cardiology, University Hospital Centre Dijon, Dijon, France
[4]Department of Pharmacy, University Hospital Centre Dijon, Dijon, France
[5]Department of Rheumatology, University Hospital Centre Dijon, Dijon, France

Correspondence to Professor Bernard Bonnotte, Faculty of Medicine, University of Burgundy, Dijon 21079, France; bernard.bonnotte@chu-dijon.fr

Acknowledgements The authors thank Suzanne Rankin for proof-reading and Cécile Straub and Sophie Nurdin for conducting interviews.

Ann Rheum Dis: first published as 10.1136/annrheumdis-2020-218360 on 7 August 2020. Downloaded from http://ard.bmj.com/ on March 4, 2022 by guest. Protected by copyright.

Contributors YC and BB were the principal investigators and take primary responsibility for the paper. RP, HG, MS, PB, AR and BB recruited the patients and collected the data. YC and BB coordinated the research. RP, HG, MS, YC and BB drafted the manuscript. RP, HG, MZ, YC and BB contributed to data interpretation.

Funding This work was supported by the Dijon Football Côte d'Or, Dijon University Hospital, and by grants from the Agence Régionale de Santé (ARS) de Bourgogne-Franche-Comté and from the Regional Council of Burgundy-Franche-Comté.

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.

Provenance and peer review Not commissioned; internally peer reviewed.

This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

RP and HG contributed equally.

To cite Praliaud R, Greigert H, Samson M, *et al*. *Ann Rheum Dis* 2021;**80**:e102.

Received 19 June 2020
Accepted 20 June 2020
Published Online First 7 August 2020

Ann Rheum Dis 2021;**80**:e102. doi:10.1136/annrheumdis-2020-218360

ORCID iDs
Maxime Samson http://orcid.org/0000-0002-6547-232X
Bernard Bonnotte http://orcid.org/0000-0001-7229-3808

REFERENCES

1 Monti S, Balduzzi S, Delvino P, *et al*. Clinical course of COVID-19 in a series of patients with chronic arthritis treated with immunosuppressive targeted therapies. *Ann Rheum Dis* 2020;79:667–8.
2 Evers AWM, Zautra A, Thieme K. Stress and resilience in rheumatic diseases: a review and glimpse into the future. *Nat Rev Rheumatol* 2011;7:409–15.
3 de Brouwer SJM, Kraaimaat FW, Sweep FCGJ, *et al*. Experimental stress in inflammatory rheumatic diseases: a review of psychophysiological stress responses. *Arthritis Res Ther* 2010;12:R89.
4 Samson M, Corbera-Bellalta M, Audia S, *et al*. Recent advances in our understanding of giant cell arteritis pathogenesis. *Autoimmun Rev* 2017;16:833–44.
5 Mainbourg S, Addario A, Samson M, *et al*. Prevalence of giant cell arteritis relapse in patients treated with glucocorticoids: a meta-analysis. *Arthritis Care Res* 2020;72:838–49.

Ann Rheum Dis: first published as 10.1136/annrheumdis-2020-218360 on 7 August 2020. Downloaded from http://ard.bmj.com/ on March 4, 2022 by guest. Protected by copyright.