Correspondence on 'Impact of COVID-19 pandemic on patients with large-vessel vasculitis in Italy: a monocentric survey'

We read with great interest the paper published by Tomelleri *et al*[1] on 'Impact of COVID-19 pandemic on patients with large-vessel vasculitis in Italy: a monocentric survey'. The authors aimed to evaluate the impact of COVID-19 and national lockdown among patients with large-vessel vasculitis (LVV) in a single centre by April 2020. First, we would like to congratulate them for the novelty of their work during the first wave of the pandemic in Italy. The implementation of ultrasound (US) fast-track pathways (FTPs) in rheumatology, aiming at an early diagnosis of giant cell arteritis (GCA), has led to a decrease in permanent vision loss.[2] However, the COVID-19 pandemic lockdown has had a negative impact on patients with GCA, leading to difficulties in monitoring, reduced access to temporal artery biopsy[3] and a decline in referral rates of patients accompanied by cases with delayed presentation and vision loss.[4] Additionally, recent data suggest that COVID-19 seems to be more severe in patients with LVV with higher rates of hospitalisation and lethality,[5] although these results should be further confirmed. The aim of our analysis was to assess the rate of US examinations included in our FTP and the rate of permanent visual loss due to GCA since the COVID-19 pandemic.

We conducted a retrospective observational study including patients referred to our US FTP for evaluation of possible GCA over a 16-month period. All patients underwent US examination within 24 hours per protocol. Visual loss due to anterior ischaemic optic neuropathy (AION) confirmed by ophthalmology evaluation was checked. The gold standard for GCA diagnosis was the clinical confirmation after 6 months of follow-up. We compared the 8-month pre-COVID and post-COVID-19 outbreak periods (July 2019–February 2020 and March 2020–October 2020). Since the beginning of the COVID-19 pandemic, 31 patients were referred to the FTP compared with 50 patients in the previous 8 months (38% reduction), although the service was regularly operating (figure 1). However, the number of newly GCA diagnosis during the COVID-19 pandemic remained similar, although the percentage over the total examinations was higher (45.2% vs 22%, p=0.028). Demographic, clinical and US variables of patients before and after the COVID-19 outbreak are shown in table 1. We found no notable differences in clinical referral patterns. However, it is noteworthy that two patients presented with AION during the COVID-19 pandemic, while no AION in the previous period occurred, although these differences were not statistically significant (p=0.14). During confinement, patients referred to the FTP presented higher markers of systemic inflammation as shown by higher C reactive protein (7.6 mg/dL vs 3.4 mg/dL, p=0.008), erythrocyte sedimentation rate (73.9 mm/hour vs 45.7 mm/hour, p=0.02), platelets (342.1 10^9/L vs 254.1 10^9/L, p=0.001) and lower haemoglobin levels (11.7 g/dL vs 12.8 g/dL, p=0.019). We found no differences in the proportion of patients with global positive US findings (38.7% vs 22%, p=0.115), although the halo and compression sign were more frequently found during the COVID-19 pandemic (38.7% vs 16%, p=0.021, and 25.8% vs 10%, p=0.06, respectively). It is also worth highlighting a higher proportion of positive temporal artery biopsy during the COVID-19 pandemic (50% vs 33%, p=0.049).

Our data show a reduction in use of GCA FTP since the COVID-19 outbreak and an increase of possibly preventable AION. The ischaemic complications of GCA include stroke, blindness or myocardial infarction, so an early and accurate diagnosis is needed. US FTP has been demonstrated to be useful in the reduction of permanent vision loss,[2 6] so an impaired use of this tool may lead to worse outcomes. Our results go in line and confirm previous work that noticed a reduction in the requests for FTP assessments by May 2020.[4] Although a higher proportion of patients referred to the FTP had GCA, the number of newly diagnosed GCA remained similar before and after the COVID-19 outbreak, in contrast with other studies that observed an increased number of GCA after the COVID-19 outbreak.[7 8] In conclusion, our study highlights the potential risks of COVID-19 lockdown in the reduced referral of GCA with suspected GCA, the occurrence of permanent visual loss and the need for maintaining urgent access to FTP during the COVID-19 pandemic.

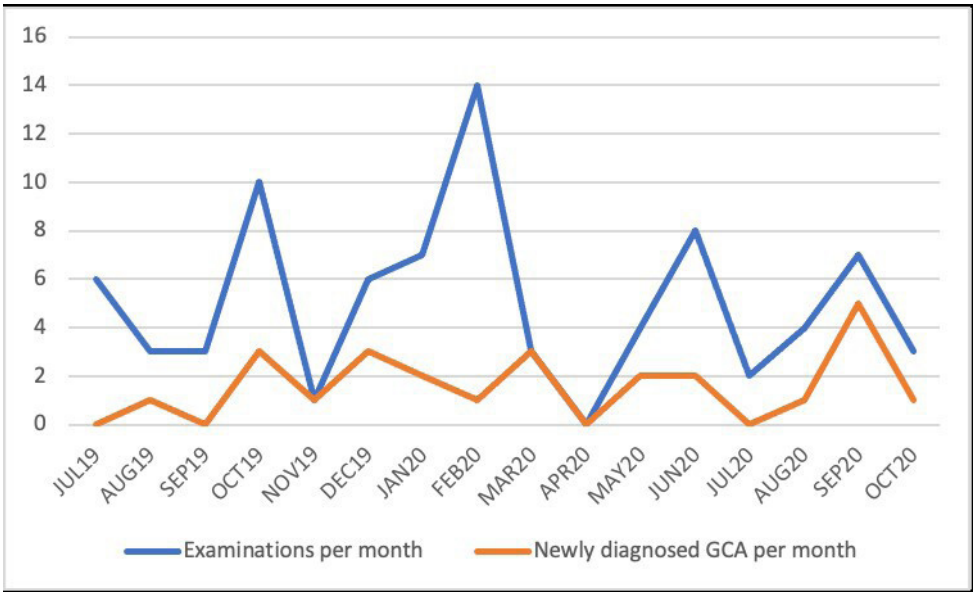

Figure 1 Number of patients evaluated in the fast-track pathway and number of new GCA diagnosis over the study period. GCA, giant cell arteritis.

Table 1 Clinical, laboratory and US findings of patients referred to the fast-track clinic for suspected GCA before and after lockdown

	Total n=81	8-month period previous to lockdown (July 2019–February 2020) n=50	8-month period after lockdown (March 2020–October 2020) n=31	P value
Age (years), mean (SD)	74.1 (11.2)	75 (10.8)	72.7 (11.8)	0.394
Female, n (%)	25 (30.9)	18 (36)	7 (22.6)	0.204
Baseline use of steroids, n (%)	37 (46.3)	26 (53.1)	11 (35.5)	0.124
Temporal artery biopsy positive (n=16), n (%)	5 (31.3)	1 (11.1)	4 (57.1)	0.049
^{18}F-FDG-PET/CT positive (n=23), n (%)	10 (43.5)	3 (33.3)	7 (50)	0.669
Fulfilling 1990 GCA criteria, n (%)	18 (22.2)	10 (20)	8 (25.8)	0.541
PMR diagnosis before US examination, n (%)	27 (33.3)	20 (40)	7 (22.6)	0.106
Headache, n (%)	35 (43.2)	26 (52)	9 (29)	0.043
Scalp tenderness, n (%)	5 (6.2)	4 (8)	1 (3.2)	0.386
Jaw claudication, n (%)	12 (14.8)	7 (14)	5 (16.1)	0.793
Visual symptoms, n (%)	14 (17.3)	8 (16)	6 (19.1)	0.698
Fever, n (%)	10 (12.3)	5 (10)	5 (16.1)	0.415
Myalgias, n (%)	40 (49.4)	24 (48)	16 (51.6)	0.752
AION, n (%)	2 (2.5)	0 (0)	2 (6.5)	0.14
Abnormal TA clinical examination, n (%)	5 (6.2)	4 (8)	1 (3.2)	0.386
CRP (mg/dL), mean (SD)	5 (6.2)	3.4 (5.1)	7.6 (7.1)	0.008
ESR (mm/hour), mean (SD)	56.2 (34.7)	45.7 (30.5)	73.9 (34.5)	0.002
Haemoglobin (g/dL), mean (SD)	12.5 (1.8)	12.8 (1.6)	11.7 (1.9)	0.019
Platelets 10^9/L, mean (SD)	283.8 (113.7)	254.1 (91.3)	342.1 (131.6)	0.001
Positive US findings, n (%)	23 (28.4)	11 (22)	12 (38.7)	0.115
Temporal artery positive US findings, n (%)	15 (18.5)	8 (16)	7 (22.6)	0.459
Axillary or subclavian positive US findings, n (%)	13 (16)	6 (12)	7 (22.6)	0.207
Temporal artery+axillary or subclavian positive US findings, n (%)	5 (6.2)	3 (6)	2 (6.5)	0.935
Halo sign positive, n (%)	20 (24.7)	8 (16)	12 (38.7)	0.021
Compression sign positive, n (%)	13 (16)	5 (10)	8 (25.8)	0.06
GCA clinical diagnosis, n (%)	25 (30.9)	11 (22)	14 (45.2)	0.028

AION, anterior ischaemic optic neuropathy; CRP, C reactive protein; ESR, erythrocyte sedimentation rate; FDG, fluorodeoxyglucose; GCA, giant cell arteritis; PET, positron emission tomography; PMR, polymyalgia rheumatica; TA, Temporal artery; US, ultrasound.

Fernando Montero ,[1] **Isabel Castrejón,**[1,2] **Julia Martínez-Barrio,**[1,2] **Juan Carlos Nieto-González,**[1,2] **Javier Rivera,**[1,2] **José María Álvaro-Gracia** ,[1,2] **Juan Molina Collada** [1,2]

[1]Department of Rheumatology, Hospital General Universitario Gregorio Marañón, Madrid, Spain
[2]Instituto de Investigacion Sanitaria Gregorio Marañón, Madrid, Spain

Correspondence to Dr Juan Molina Collada, Department of Rheumatology, Hospital General Universitario Gregorio Marañón, Madrid 28007, Spain; molinacolladajuan@gmail.com

Twitter Juan Molina Collada @jmolinacollada

Contributors All authors made substantial contributions to the conception and design of this study. Subject recruitment and ultrasound examination were performed by JMC. JMC and FM collected the epidemiological and clinical data and performed the statistical analysis and study design. FM, IC, JM-B, JCN-G, JR, JMA-G and JMC drafted the manuscript. All coauthors revised the final manuscript.

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ORCID iDs
Fernando Montero http://orcid.org/0000-0003-4594-7663
José María Álvaro-Gracia http://orcid.org/0000-0002-0343-3747
Juan Molina Collada http://orcid.org/0000-0001-5191-7802

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