

COVID-19 pandemic: an opportunity to assess the utility of telemedicine in patients with rheumatic diseases

We read with interest the letter published by Bozzalla Cassione *et al*,¹ in which authors evaluated 165 patients with systemic lupus erythematosus using telemedicine as the follow-up method. As in Italy, the high infectivity and the risk of collapse of intensive care units led to the Spanish government to announce on 14 March the strict confinement and prohibition of social mobility to ensure a decrease in COVID-19 contagion rates. As a consequence, physical consultations of rheumatology outpatients have been replaced by phone consultations to prevent the risk of contagion.² One of the most important concerns that limits the care quality of rheumatic patients in Spain is the pressure of healthcare, since the number of patients is excessive and human resources are limited. This epidemic outbreak has proven to be a great opportunity to test phone consultations in assisting rheumatic patients. The rheumatology department of Reina Sofía University Hospital in Córdoba (Spain) conducted a survey among rheumatic patients that was disseminated via patient organisations and social media throughout the national territory between 25 April and 5 May. The objective of this survey was to evaluate the patients' level of satisfaction with the phone consultation and the profile of patients who considered this type of consultation to be useful for future implementation.

In this survey, the following data were collected: sex, age, diagnosis, current treatment and disease status (pain, stiffness, fatigue and depression in visual analogue scales ranging from 0 to 100). We also asked patients whether they underwent a phone consultation with their rheumatologist during the pandemic, the patients' level of satisfaction with this consultation (0–100 scale) and their opinion of the utility of phone consultation in the future.

On 5 May, a total of 644 patients completed the survey, of which 244 (37.9%) underwent a phone consultation during confinement. The mean level of satisfaction of this consultation was 64.7 ± 35.8 . Among the 244 patients who received a phone consultation, 220 patients answered the following question: 'Do you think that phone consultation could be useful in the monitoring of your rheumatic disease?'. A total of 116 (52.7%) opined 'yes' and 104 (47.3%) answered 'no'. The characteristics of patients who considered the phone consultation to be useful in comparison with those who thought that would not be useful are shown in the [table 1](#).

These results showed that neither gender nor age were associated with good acceptance of phone consultation, although young patients showed a trend towards better satisfaction with this type of assistance. We also found a similar prevalence of diagnosis between patients who considered useful phone consultation and those who did not. We expected to find that patients under biological disease-modifying antirheumatic drugs would be more prone to feeling unsatisfied with a phone consultation due to their need for tight control of their disease; however, interestingly, there were no differences in opinions on phone consultations with regard to treatment intake. The only difference found between satisfied and unsatisfied patients was the level of symptomatology. Patients who considered the phone consultation to be useful showed lower levels of axial pain (52.4 ± 32.8 vs 63.7 ± 29.8), peripheral stiffness (47.2 ± 29.4 vs 56.1 ± 29.0) and axial stiffness (47.6 ± 32.7 vs 62.1 ± 29.5) than did patients who did not find it useful.

Based on this survey, it seems that there is no specific profile of patients who considered a phone consultation to be useful, since neither the diagnosis nor the treatment intake was associated with this opinion. However, these results suggest that the status of the disease in terms of activity is the most important factor in patients' acceptance of a phone consultation for their monitoring; to a lesser extent, young age was another important

Table 1 Comparison of clinical characteristics between patients who considered phone consultation useful and those who did not

	Overall population N=220	Patients who considered phone consultation to be useful n=116	Patients who did not consider phone consultation to be useful n=104	P value
Gender (female)	159/218 (72.9%)	86/115 (74.8%)	73/103 (70.9%)	0.517
Age	46.6 (13.6)	44.9 (14.3)	48.4 (12.6)	0.059
SpA or PsA	110/220 (50.0%)	53/116 (45.7%)	57/104 (54.8%)	0.177
Rheumatoid arthritis	47/220 (21.4%)	23/116 (19.8%)	24/104 (23.1%)	0.557
Autoimmune diseases	30/220 (13.6%)	18/116 (15.5%)	12/104 (11.5%)	0.280
Osteoarthritis or osteoporosis	11/220 (5.0%)	8/116 (6.9%)	3/104 (2.9%)	0.173
Fibromyalgia	14/220 (6.4%)	8/116 (6.9%)	6/104 (5.8%)	0.732
Other diagnosis	8/220 (3.6%)	6/116 (3.6%)	2/104 (1.9%)	0.392
NSAID use	130/220 (59.1%)	67/116 (57.8%)	63/104 (60.6%)	0.671
csDMARD use	83/220 (37.6%)	48/116 (41.4%)	35/104 (33.7%)	0.238
bDMARD use	95/220 (43.2%)	47/116 (40.5%)	48/104 (46.2%)	0.399
VAS peripheral pain	51.6 (29.7)	48.6 (30.5)	54.9 (28.6)	0.116
VAS axial pain	57.9 (31.8)	52.4 (32.8)	63.7 (29.8)	0.011
VAS peripheral stiffness	51.5 (29.5)	47.2 (29.4)	56.1 (29.0)	0.032
VAS axial stiffness	54.7 (31.9)	47.6 (32.7)	62.1 (29.5)	0.001
VAS fatigue	57.1 (29.9)	54.5 (29.2)	59.8 (30.5)	0.208
VAS anxiety	50.4 (30.1)	46.9 (30.5)	54.3 (29.4)	0.098
VAS depression	49.4 (31.4)	46.5 (31.8)	52.5 (30.8)	0.194

Univariate comparisons using chi-square or T-test.

Results are represented as mean and standard deviation (continuous variables) or as absolute frequency and percentage (qualitative variables).

bDMARD, biological disease-modifying antirheumatic drug; csDMARD, conventional synthetic disease-modifying anti-rheumatic drug; NSAID, Non-steroidal anti-inflammatory drugs; PsA, psoriatic arthritis; SpA, spondyloarthritis; VAS, visual analogue scale (0–100 scale).

factor. The results from this survey will be helpful in the design of a model of telemedicine for patients with chronic rheumatic diseases, in which on-site consultation could be alternated with phone supervision during periods of low disease activity.

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REFERENCES

- Bozzalla Cassione E, Zanframundo G, Biglia A, *et al*. COVID-19 infection in a northern-Italian cohort of systemic lupus erythematosus assessed by telemedicine. *Ann Rheum Dis* 2020;annrheumdis-2020-217717.
- Hollander JE, Carr BG. Virtually perfect? telemedicine for Covid-19. *N Engl J Med* 2020;382:1679–81.