POS1171

THE COVID-19 PANDEMIC PROMPTS ISOLATION AND BEHAVIORAL CHANGES IN PATIENTS WITH CHRONIC RHEUMATIC DISEASES LEADING TO REDUCED PHYSICAL ACTIVITY, INCREASED PAIN, DISEASE ACTIVITY, AND LOW SEROPREVALENCE OF SARS-COV2 ANTIBODIES

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Background: The coronavirus disease 2019 (COVID-19) pandemic has complicated the management of chronic rheumatic diseases (CRD). Patients with CRDs are immunocompromised and generally prone to infection. The fear of COVID-19 and the degree of the self-imposed shielding strategy implemented by many patients introduced new challenges for the patients. Although recommendations have been developed to manage patients with CRDs by, i.e., EULAR, strong evidence is still lacking to guide treatment decisions.

Objectives: This study aimed to assess the seroprevalence of SARS-CoV-2 antibodies in patients with CRDs and healthy controls during the first wave of the pandemic. We further evaluated the effect of the pandemic on patient behavior regarding medication, exercise, pain, and experienced disease activity. Finally, we investigated the self-perceived consequences of the pandemic and lock-down on anxiety and depression in patients with CRDs compared with healthy controls.

Methods: More than 900 participants were included in the study: 405 patients with rheumatoid arthritis or systemic lupus erythematosus and 513 blood donors. All participants had SARS-CoV-2 antibodies measured (Wantai SARS-CoV-2 total antibody ELISA; sensitivity 96.7%, specificity 99.5%) and answered a questionnaire concerning behavior, anxiety, and symptoms of depression (PHQ-9). The participants with CRD were further asked about physical activity, adherence to medication, and disease-related symptoms.

Results: CRD patients had a sixfold lower seroprevalence of SARS-CoV-2 antibodies compared to controls ($p=0.03$) (Figure 1). Almost 60% of patients were unable to exercise as usual, leading to increased pain in 34%, and experience of increased disease activity in 27%. Approximately 10% of patients reduced or discontinued their immunosuppressive treatments at their own initiative. Symptoms of moderate depression were present in 19% of patients compared to 6.8% of controls ($p<0.001$).

Figure 1. Presence of SARS-CoV-2 antibodies in chronic rheumatic disease patients (1/365, 0.3%) and controls (blood donors (10/513, 1.9%), (* $p=0.03$).

Conclusion: Low seroprevalence in patients with CRDs indicates successful mitigation of exposure to SARS-CoV-2. However, this appears to occur at the expense of physical activity and adherence to immunosuppressive treatment. Our results raise an important concern regarding the consequences of isolation for patients with CRDs. The result of physical isolation is a risk of severe mental health issues, physical inactivity, self-medication, increased pain, and increased disease activity. The long-term consequences of recommendations for patients with CRDs should be taken into account when tackling the continuing pandemic.

Table 1.

Patient characteristics	CRD cohort	Blood donors	
Patients included, n	405 (206 SLE, 199 RA)	513	
Disease duration, years (IQR)	12.9 (7.0-23.0)		
Age, years (IQR)	56.9 (43.6-66.9)	47 (33-57)	
BMI, kg/m ² (IQR)	25.0 (22.1-28.6)	25.5 (23.1-28.4)	
Charlson Comorbidity Index, score (IQR)	2 (1-4)		
Behavioral and mental changes due to the risk of COVID-19	CRD cohort	Blood donors	p-value
Washes hands more often (%)	91.6	91.4	0.92
Coughing or sneezing in the elbow (%)	83.0	84.0	0.67
Wearing face mask (%)	5.0	2.4	0.001
Restricts the use of public transport (%)	47.4	32.9	<0.001
Avoid places where many people are gathered (%)	80.7	70.0	<0.001
Stay at home (%)	51.6	35.3	<0.001
Symptoms of moderate depression, PHQ-9 >=10, (%)	19.01	6.75	<0.001
Pandemic effect on training, pain and disease activity	CRD cohort		
Have you been able to exercise as usual, yes (%)	41.4		
Have you been less physically active due to COVID-19, yes (%)	44.7		
Has the degree of physical activity increased the pain from your rheumatological disease? yes(%)	33.9		
Have you experienced increased disease activity during COVID-19? yes(%)	26.9		

Interquartile range (IQR), Patient Health Questionnaire-9 (PHQ-9).

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POS1172

COVID-19 ACROSS RHEUMATOLOGY: A BIBLIOMETRIC STUDY

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Background: The Coronavirus disease 2019 (COVID-19) outbreak spread rapidly among the whole world, becoming the greatest pandemic for the decades. It triggered the enormous challenges for the global health system, forcing doctors and patients to adapt to new realities and the field of rheumatology was not an exception.

Objectives: The aim of this study was to analyze articles covering interconnection between COVID-19 and rheumatic diseases; to investigate the common features of papers in this category and indicate the most influential among them; to determine which rheumatic nosologies were most represented.

Methods: For retrieving of literature data, we applied the bibliometric database Scopus and conducted our search on 12th of January using following keywords: "rheumatoid arthritis" OR "systemic lupus erythematosus" OR "systemic sclerosis" OR "vasculitis" OR "myositis" OR "rheumatology" AND "COVID-19". All selected articles were analyzed according to various aspects: type of document, authorship, journal, citations score, rheumatology field, country of origin, language, and keywords. We have built the visualizing keywords network (Figure 1) with the help of software tool VOSviewer version 1.6.15 (the minimum keyword occurrence threshold was set at 5).

Figure 1.

Results: A total of 844 literature items were obtained. After screening of title, abstract and keywords we excluded 106 records as they were not emphasized the rheumatological perspective on COVID-19 and as a result were inapplicable for this study. The 738 retrieved articles were mostly (86.8%) open access publications. The top five journals that contributed most to the coverage of this topic were: *Annals Of The Rheumatic Diseases* (n=59), *Clinical Rheumatology* (n=41), *Lancet Rheumatology* (n=24), *Arthritis And Rheumatology* (n=20) and *Rheumatology International* (n=19). The origin of most studies was not surprisingly from those countries, which belong to the top ten according to the total cases of COVID-19 [1] (USA – 167; Italy – 148; UK – 76; India – 60 and Spain – 58). Most items were written in English but articles in German (n=12), Spanish (n=11), Russian (n=5) and Chinese (n=2) could also be found. Analyzed studies were designed in the form of Original Articles (41.2%), Reviews (23.7%), Letters (21.8), Notes (6.9%), Editorials (5.1%). According to the citations scores, articles of highest interest were dedicated to clinical course of COVID-19 in patients with autoimmune pathologies. The other highly cited studies were about cytokine storm and perspective usage of biological drugs for severe cases of COVID-19. Our analysis of keywords showed that the most widely discussed rheumatic disease in the view of COVID-19 was systemic lupus erythematosus (n=188), followed by vasculitis (n=132), rheumatoid arthritis (n=90), systemic sclerosis (n=32) and psoriatic arthritis (24). The liveliest discussion about disease-modifying antirheumatic drugs in COVID-19 revolved around hydroxychloroquine (n=305), corticosteroids (n=161), tocilizumab (n=83), methotrexate (n=46) and anakinra (n=34).

Conclusion: As far as we know, it is the first bibliometric overview of studies dedicated to interrelation between COVID-19 and rheumatic pathology. The high number of open access items contributes to the increase of research visibility in this emergently developing research field and facilitates the process of scientific data sharing. The conducting of bibliographic studies may provide a valuable guide through this area of knowledge.

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[1] <https://www.worldometers.info/coronavirus/> Accessed on January 12, 2021

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POS1173

A SHORT DELAY IN ARTHRITIS CARE IS ASSOCIATED WITH HIGHER DISEASE ACTIVITY - LESSONS FROM THE CORONAVIRUS DISEASE 19 (COVID-19) PANDEMIC

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Background: Although disease activity is a significant outcome in rheumatology, few studies have investigated the relationship between routine care of rheumatic conditions and disease activity control.

Objectives: To determine the association between delay in routine care of chronic inflammatory arthritides (CIAs) and disease activity during the first wave of coronavirus disease 19 pandemic in Verona, Italy.

Methods: This study enrolled patients with an established diagnosis of rheumatoid arthritis (RA), psoriatic arthritis (PsA), ankylosing spondylitis (AS) and undifferentiated arthritis (UA). Between 01/04/2020 and 30/06/2020, participants were emailed an online questionnaire. Items comprised multiple or single-choice questions evaluating routine rheumatology care disruptions/delays and disease characteristics, treatments, comorbidities, and demographics. Compliance to anti-rheumatic medications was evaluated with I-CQR5. Disease activity was

assessed with RAPID3, and active disease was defined as a RAPID3 score >1. Study period referred to the time between the last rheumatology assessment and the date of enrolment.

Results: Of 1210 patients contacted, 450 participated, of whom 219 CIAs patients were included (RA 55.3%, PsA 35.2%, AS 15.1%, UA 3.7%). One hundred twenty-five patients (57.1%) had their routine clinical assessment delayed (median days 68.4; IQR 66.8, 85.9). Patients in this group had significantly higher MDHAQ (p=0.001) and RAPID3 (p=0.031) scores, while they did not differ for disease severity, medications or compliance. Most (87.7%) reported good compliance to therapy; only 5.9% had difficulties in supplying anti-rheumatic medications, and 13.2% discontinued medications for at least four weeks for any reason. However, several patients (37.9%) reported moderate-to-high worse disease activity perception due to routine care delay, and 31.1% self-reported a disease flare (median RAPID3 score 3.8; IQR 2.0, 5.4). One hundred one patients (46.1%) had high disease activity, while only 15.1% were in remission. In logistic regression, active disease was significantly associated with delay of scheduled routine care visit, independent of disease duration, time from last rheumatology assessment, therapy with b/tsDMARDs, and compliance (Table 1, Figure 1 below).

Table 1.

Predictor	Active (n=186)	Remission (n=33)	OR	P-value	95% CI Inf.	95% CI Sup.
Routine care delay (yes vs no)	113 (60.8%)	12 (36.4%)	.030	2.459	1.091	5.543
Disease duration (years)	10 (4.0, 20.0)	10.5 (7.0, 19.8)	.695	1.007	.972	1.044
Time since last rheumatology assessment (days)	68.4 (66.8, 75.8)	71.2 (66.9, 74.9)	.854	1.002	.978	1.027
b/tsDMARDs (yes vs no)	105 (56.5%)	15 (45.5%)	.653	1.202	.538	2.687
I-CPR5 (likely low vs likely high adherent)	36 (19.4%)	10 (30.3%)	.187	.563	.240	1.321

Figure 1.

Conclusion: In patients with established CIAs, a relatively short delay in routine assessment by a rheumatologist resulted in higher disease activity. Frequent rheumatology referrals appear to be a critical factor for disease activity control in CIAs.

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POS1174

HYPERINFLAMMATION AND CLINICAL OUTCOMES FOR PATIENTS WITH SYSTEMIC RHEUMATIC DISEASES HOSPITALIZED FOR COVID-19: A COMPARATIVE COHORT STUDY

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