of the innate immune system and excessive production of proinflammatory cytokines, including interleukin (IL)-1 β , IL-6, interferon-gamma, and tumor necrosis factor-alpha, all of which have increased in severe cases in COVID-19 [1-3].

Objectives: The aim of this study is to report clinical characteristics and outcome of FMF patients with COVID-19.

Methods: This study included 48 consecutive FMF patients who were diagnosed COVID-19 by SARS-CoV-2 nucleic acid RT-PCR in nasopharyngeal swab or sputum, or symptoms and computed tomography findings suggestive for COVID-19. Data on demographic and clinical characteristics of FMF disease, clinical course and outcome of COVID-19 were evaluated.

Results: The median age of patients was 35.5 (29-43.5) years, ranging from 18 to 87 years. The median disease duration of FMF was 10 (6-16) years. The most common presenting symptoms and signs of patients during attacks were peritonitis (85.5%), fever (81.3%), and pleuritis (48%). Twelve (25%) patients had amyloidosis. Comorbidities were present in half of patients with ankylosing spondylitis (21%) and hypertension (17%) being the most frequently seen. Two-third of patients (66%) were in remission for FMF. The median dosage of colchicine treatment for FMF was 1.5 (IQR 1) mg/day. 90% of patients continued colchicine treatment for FMF during the COVID-19 course. The baseline characteristics and treatment modalities of patients were demonstrated in Table 1. Forty-six patients presented with at least one COVID-19 symptoms. Fever (73%), myalgia/arthritis (69%), and cough (60%) were the most common symptoms. 16 patients were admitted at hospital, 5 of them required oxygen therapy and 2 patients with amyloidosis developed ARDS and went to intensive care unit (ICU) for invasive mechanical ventilation (IMV). One patient who had been followed-up at ICU died.

Conclusion: Our FMF patients with COVID-19 have similar clinical features and outcomes as general population. Dysregulation of innate immune system in FMF might not be risk factors for COVID-19. Besides, colchicine and IL-1 inhibitors intake might have protective and preventive effects on COVID-19 progression.

Table 1. Baseline characteristics, treatment modalities and outcome of patients

Age years, median (IQR)	39.4 (15)
Gender (F/M)	25/23
FMF Disease duration, years, median (IQR)	10 (10)
Mutations*	
Monoallelic mutation, n (%)	6 (14)
Biallelic mutation, n (%)	34 (81)
Homozygous M694V mutation	18 (43)
Heterozygous M694V mutation	15 (36)
Comorbidities, n (%)	24 (50)
FMF treatment	
Colchicine 1 mg/day, n (%)	17 (35.5)
Colchicine 1.5 mg/day, n (%)	18 (37.5)
Colchicine 2 mg/day, n (%)	13 (27)
Anakinra, n (%)	12 (25)
Canakinumab, n (%)	3 (6.3)
Positive SARS-CoV-2 RT-PCR, n (%)	42 (87.5)
Interstitial pneumonia in CT scan, n (%)	15 (31.3)
COVID-19 treatment, n (%)	46 (95.8)
Outpatient treatment, n (%)	32 (66.7)
Hospitalized, not required supplemental oxygen, n (%)	9 (18.8)
Hospitalized, required supplemental oxygen, n (%)	5 (10.4)
ICU, required IMV, n (%)	2 (4.2)
Outcome	
Recovered, n (%)	47 (98)
Deceased, n (%)	1 (2)
Complications, n (%)	3 (6.3)

*42 patients were included in the analysis

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POS1194

THE EFFECT OF SARS-COV-2 ON THE COURSE AND THE TREATMENT OF RHEUMATIC INFLAMMATORY DISEASES. EXPERIENCE FROM THE NORTHWESTERN GREECE

E. Pelechas¹, E. Kaltsonoudis¹, M. Migos¹, P. Karagianni², A. Kavvadias³, P. Voulgaris¹, A. Drosos¹. ¹University of Ioannina, School of Medicine, Greece, ²Internal Medicine - Division of Rheumatology, Ioannina, Greece; ³University of Ioannina, School of Medicine, Greece, Laboratory Medicine, Ioannina,

Greece; ³University of Ioannina, School of Medicine, Greece, Gastroenterology, Ioannina, Greece

Background: COVID-19 has been shown to significantly affect the vulnerable population [1,2]. Among them, patients suffering from inflammatory rheumatic diseases, and especially the immunosuppressed [3].

Objectives: to assess the effect of SARS-CoV-2 on the course and the treatment of rheumatic inflammatory diseases.

Methods: from February to December 2020, 46 patients with inflammatory rheumatic diseases were included (32 female) that got infected with the SARS-CoV-2. Mean age was 65 years old, 17 were smokers, 12 had arterial hypertension, 8 diabetes mellitus, and 3 hypothyroidism. Most of them had their comorbidities well-controlled and their rheumatic disease was in remission. More specifically, 24 patients had rheumatoid arthritis, 13 psoriatic arthritis, and 9 ankylosing spondylitis. All patients were under treatment with conventional synthetic (cs) and/or biological (b) disease-modifying anti-rheumatic drugs (DMARDs), while 7 of them were also on treatment with glucocorticoids (GC) (<5mg/day). Twenty-eight patients were on tumor necrosis alpha (TNF- α) inhibitors (19 as monotherapy), 4 on anti-interleukin (IL)-6 monotherapy, 3 on Janus Kinase (JAK) inhibitors plus on low dose methotrexate (MTX), and the rest (11 patients) were on a csDMARD with or without GCs.

Results: positive patients with the SARS-CoV-2, instructed to discontinue their immunosuppressive treatment, except GCs that were adjusted for their disease. Most patients (37 out of 46) had a mild disease course and their symptomatology was nothing more than a simple flu-like syndrome. Furthermore, on 9 of them olfactory dysfunction and gastrointestinal manifestations as well as low grade fever were noted but without the need of a hospital admission. On the other hand, only 5 patients needed hospitalization (2 on MTX monotherapy and 3 on combination therapy) due to dyspnea with low oxygen saturation (hypoxemia) and high fever. From those 5, 3 had a short in-hospital stay, while 2 developed pneumonia and a longer in-hospital stay was required in order to get the appropriate treatment. None of the patients did not require an intensive care unit admission. Finally, in 14 patients that got infected from February to May 2020, viral antibodies had been measured. All patients had high titres of IgG antibodies in their serum for as long as six months after their infection. Of note, none of the infected patients were smokers.

Conclusion: patients with rheumatic diseases that are in remission using low doses of GCs and DMARDs, have almost the same chances with the general population to have a serious course of their infection with the SARS-Cov-2. In addition, in these patients, the immune response appears to be adequate, both in the production and maintenance of antibodies, which appear to be maintained for at least 6 months after infection.

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POS1195

ASSESSING ANTIBODY STATUS FOR SARS-CoV-2 IN PEOPLE WITH CORONAVIRUS INFECTION: A TIME COURSE STUDY IN PEOPLE WITH AUTOIMMUNE CONDITIONS

K. Biddle¹, S. Koushesh¹, A. Blundell¹, D. Clark¹, S. Krishna¹, N. Sofat¹. ¹St George's University of London, Institute for Infection and Immunity, London, United Kingdom

Background: With the emergence of the global coronavirus pandemic, increasing concerns have been raised about the course of SARS-CoV-2 infection in people with immune-mediated disorders.

Objectives: In this study we aimed to assess the time course of proven SARS-CoV-2 infection, development of humoral immunity with detectable antibodies to the virus and evaluate any changes in antibody titres over time.

Methods: We recruited 114 participants in total who had potential symptoms of Covid-19 infection. Participants were recruited from rheumatology or inflammatory bowel disease (IBD) clinics from their records who attended a London Teaching hospital for care. Ethical Approval was in place for the study. Age- and gender- matched control participants without any underlying rheumatological condition/IBD were recruited as a comparator group. Clinical symptoms for Covid-19 infection were assessed using the Covid-19 Rheumatology Global

Alliance assessment criteria (<https://rheum-covid.org/>). Information about Disease Modifying Anti-Rheumatic Drug (DMARD) drug use was also recorded. Participants' serum samples were collected for quantitative serological assessment of antibodies to SARS-CoV-2 using the Mologic Enzyme-Linked Immunosorbent Assay (ELISA) IgG kit. The optical density values were plotted against time using a normalisation as previously described (1). A cut-off above 0 indicated positive serology.

Results: A total of 114 subjects were recruited into the study. Subjects were recruited if they had suspected Covid symptoms. Of the population recruited, the total number subsequently testing positive for SARS-CoV-2 was $n=59$ (either on serology or PCR). The number of subjects with autoimmune conditions diagnosed with Covid-19 was 32, with 30 subjects being symptomatic (the asymptomatic 2 subjects were excluded from further analyses). Of the 30 symptomatic subjects, the average age was 56, with a female to male ratio of 19:11. The most prevalent diagnoses were RA (30%), Psoriatic Arthritis (16.7%), SLE (10%), sarcoidosis (10%), Ulcerative Colitis (10%), Crohn's disease (10%), seronegative inflammatory arthritis (6.7%), Sjogren's (3.3%) and Juvenile Idiopathic Arthritis (3.3%). The majority were on csDMARDs (60%), biologic DMARDs (20%), tacrolimus (3.3%) and the remaining 16.7% were not on DMARDs. Most subjects required treatment in hospital (56.7%), a smaller number required high dependency care (6.7%) and the rest were treated at home (36.6%). The majority required no oxygen (63.3%), with a further 30% requiring oxygen and 6.7% needed more supportive care i.e. CPAP/ventilation. We also had a matched control group ($n=29$) of subjects who developed SARS-CoV-2 but had no underlying autoimmune conditions. These subjects had a mean age of 55, female: male ratio 18: 11. Of these 31% had home management, 55.2% had ward level treatments and 13.8% had intensive care treatment. Of the controls, 48.3% did not require oxygen, 37.9% needed simple oxygen and 13.8% were on CPAP. A total of 35 subjects from the original study have attended for follow-up visits. Antibody titres for IgG using the Mologic ELISA detection assay were compared at two visits for the control and autoimmune group. Results showed that subjects with autoimmune conditions and those without who developed SARS-CoV-2 showed very similar antibody titres by optical density (OD) (Figure 1) and maintained antibody responses beyond 6 months in most cases.

Conclusion: Serological assays can assist in the understanding of disease severity of SAR-CoV-2 infection. They can be a useful tool for patient surveillance, especially in people who are on immunomodulatory drugs and are being seen in Rheumatology services. Future work is needed to assess the duration and potential protective nature of humoral antibody responses to SARS-CoV-2.

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Figure 1.

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POS1196

COVID-19 VACCINE WILLINGNESS IN RA? RESULTS FROM THE RA LOUVAIN BRUSSELS COHORT

T. Sokolova¹, V. Pirson¹, T. Xavier¹, E. Curraj², L. Bricman¹, E. Sapart¹, S. De Montjoye¹, S. Dierckx², A. Avramovska¹, P. Durez¹. ¹Cliniques Universitaires Saint-Luc – Université catholique de Louvain (UCLouvain) – Institut de Recherche Expérimentale et Clinique (IREC), Rheumatology, Brussels, Belgium; ²CHU Mont-Godinne, UCLouvain, Rheumatology, Mont-Godinne, Belgium

Background: Over 2 million deaths from the COVID-19 disease have been reported in the world. Since no antiviral treatment is available, the vaccination is the most important option to fight the SARS-CoV-2 infection. Patients living with rheumatoid arthritis (RA) affecting the immune system or under immunosuppressive agent will be considered as a high risk population and will start

the vaccination shortly. But many patients could decline the vaccine for several reasons including safety concerns.

Objectives: The aim of this study is to evaluate the proportion of patients with RA who are favourable to COVID-19 vaccination, to know the reasons to decline and to analyse the characteristics of these patients.

Methods: We included patients with RA from the UCLouvain Brussels cohort who met the ACR/EULAR 2010 classification criteria. A simple and standard questionnaire was distributed to patients who attended rheumatology out patient and day care clinic from 14 december 20 to 14 januari 21. All patient and RA characteristics (Age, gender, education, smoking habits, disease duration, ACPA, RF, DAS28-CRP, HAQ and therapies) were collected at the same time.

Results: Data from 460 eligible RA patients were analyzed. The average age of the population is 58.21 years. 72% of the patients are women. 21% are smokers and 65% are positive for anti-citrullinated protein antibody (ACPA) with a mean DAS28-CRP of 2.39 and a mean HAQ of 0.821.

281 patients (61%) indicated they would receive the vaccine as soon as it is available. For the 179 patients (39%) who decline, the reasons for not having vaccine were no trust in the vaccine at this time (53%), fear of side effects (28%), opposition to vaccine (4%), previous SARS-CoV-2 infection (2%) and unknown (5%).

Interestingly, there were differences among RA patients not willing to receive the vaccine. Patient under the age of 50, women, low education grade, smokers, presence of RF/ACPA and treatment with a bioDMARD were less willing to receive the vaccine. No differences were observed for RA disease duration, HAQ and DAS28-CRP (see Table 1).

Table 1. Characteristics of RA population and correlation between groups.

	TOTAL n=460	VACCIN-YES n=281 (61%)	VACCIN-NO n=179 (39%)	
Age, mn	58,21 +/-0,71	60,37 ± 0,9004	54,82 ± 1,090	p=0.0001*
Group Age <30 yrs	25 (5%)	15 (5%)	10 (6%)	
Group Age =31-50 yrs	112 (24%)	53 (19%)	59 (33%)	
Group Age =51-70 yrs	209 (45%)	127 (45%)	82 (46%)	
Group Age > 70 yrs	114 (25%)	86 (31%)	28 (16%)	p=0.0003**
Gender, F/M, %-F	332/128 (F-72%)	193/88 (F-69%)	139/40 (F-78%)	p=0.043**
Educ0-1	63 (15%)	27 (11%)	36 (22%)	
Educ2-3	349 (85%)	222 (89%)	127 (78%)	p=0.003**
RA Disease duration yrs, mn	14,77 +/-0,51	15,24 +/-0,69	14,04 +/-0,73	
Smokers: YES/NO/ Ex-Smokers, %-YES	85/248/79 (21%) (17%)	42/156/52 (17%)	43/92/27 (27%)	p=0.018**
RF YES/NO, %	243/137 (64%)	133/94 (59%)	110/43 (72%)	p=0.009**
ACPA YES/NO, %	244/132 (65%)	127/93 (58%)	117/39 (75%)	p=0.001**
HAQ, mn	0,814+/-0,039	0,797+/-0,051	0,838+/-0,061	
DAS28-CRP, mn	2,39+/-0,05	2,35+/-0,07	2,44+/-0,09	
GC, YES/NO, %	360/86 (19%)	217/55 (20%)	143/31 (18%)	
csDMARDs (MTX), YES/NO, %	124/322 (72%)	72/200 (74%)	52/122 (70%)	
BioDMARDs, NO/YES, %	151/295 (66%)	107/165 (61%)	44/130 (75%)	p=0.003**

(*) - Unpaired t Test; (**) - Fisher's exact test

Conclusion: In our RA cohort, the rates of willingness to receive the vaccine are promising. Dedicated education and outreach efforts should be developed, especially in some RA subpopulation.

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POS1197

IN DEPTH IDENTIFICATION OF RISK FACTORS FOR SEVERE COVID-19, REQUIRING HOSPITALIZATION, IN PATIENTS WITH INFLAMMATORY RHEUMATIC DISEASES: RESULTS OF A DUTCH NESTED CASE CONTROL STUDY (PRELIMINARY RESULTS)

M. Opdam¹, S. Benoy², L. M. Verhoeft¹, S. Van Bijnen³, F. Lamers-Karnebeek⁴, R. A. M. Traksel², P. Vos⁵, A. Den Broeder¹, J. Broen². ¹Sint Maartenskliniek, Rheumatology, Ubbergen, Netherlands; ²Regional Rheumatology Center, Máxima Medical Center, Rheumatology, Eindhoven, Netherlands; ³Elisabeth-TweeSteden Hospital, Rheumatology, Tilburg, Netherlands; ⁴Bernhoven, Rheumatology, Uden, Netherlands; ⁵Amphia Hospital, Rheumatology, Breda, Netherlands

Background: Several risk factors for severe COVID-19 have been identified¹. An important question is whether in addition to these generic risk factors, patients with a potentially altered immune response, either by disease (inflammatory rheumatic diseases (IRDs)) or use of immunomodulatory agents (IA), carry a higher or lower risk of severe COVID-19. In addition, several other potential risk factors for severe COVID-19 have been suggested, such as vitamin D status and specific medication (NSAIDs, ACE-inhibitors)².