Conclusion: Between March and July 2020, IMIDT patients, whether or not taking imeds, did not show an increased risk of reported COVID-like symptoms compared to controls. Continuing immunosuppressant drugs as long as not ill, while following the Dutch COVID rules, appears to be safe.

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AB0668

THE ONSET OF RHEUMATOID ARTHRITIS AFTER COVID-19 – COINCIDENCE OR CONNECTED?

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Background: COVID-19, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has been suggested to induce autoimmune phenomena. Multiple studies have reported the presence of autoantibodies in patients with COVID-19. Also the presence of anti-citrullinated protein antibodies (ACPA) and flaring of rheumatoid arthritis (RA) after COVID-19 has been described.[1, 2] Furthermore, in rheumatology clinics patients may present with polyarthritis compatible with RA shortly after SARS-CoV-2 infection. However, it is unclear how often ACPA occur after COVID-19 and whether preceding COVID-19 impacts on disease presentation of RA and phenotype of the ACPA response.

Objectives: This study aims to determine the seroprevalence of ACPA after COVID-19 and to investigate the association between preceding COVID-19 infection and disease presentation of new-onset RA, including clinical phenotype and autoantibody response.

Methods: To estimate the prevalence of ACPA after COVID-19 we measured ACPA IgG in samples from 61 patients visiting the specialized post-COVID outpatient clinic of the LUMC 5 weeks after hospitalization, using routine tests or in-house ELISA. Furthermore, we identified 5 patients presenting with polyarthritis compatible with RA after SARS-CoV-2 infection. To study the impact of COVID-19 on disease presentation, we examined clinical phenotype, autoantibody isotype positivity and ACPA IgG variable domain (V-domain) glycosylation of these patients and compared these features to regular RA patients. Autoantibody isotypes, including rheumatoid factor (RF) IgM/IgA, anti-CCP2 IgG/ IgM/IgA and anti-carbamylated protein antibodies (anti-CarP) IgG were measured using in-house ELISAs. The percentage of V-domain glycosylation of purified ACPA IgG was measured with UHPLC.

Results: None of the 61 post-COVID patients tested positive for ACPA 5 weeks after hospitalization, except two patients previously diagnosed with ACPA-positive RA. Thus, we could not observe an increase in ACPA-positivity shortly after COVID-19. Of the 5 patients who developed polyarthritis compatible with RA after SARS-CoV-2 infection, the average age was 63.6 years and 2/5 were female. 4/5 patients had been hospitalized due to severe COVID-19. On average, joint complaints started 6.6 weeks after infection, although two patients reported symptoms before infection. 4/5 patients fulfilled the ACR 2010 criteria for RA. Three patients (patient 1, 4, 5) were phenotypically very similar to regular new-onset RA patients. Patient 3 had a history of seronegative RA and had been in DMARD-free remission for 5 years. She flared 6 weeks after SARS-CoV-2 infection. Patient 2 had a remarkably different presentation. He was admitted with a suspected septic polyarthritis or pneumonia with reactive polyarthritis 6 weeks after COVID-19. ACPA level was low positive. The patient died unexpectedly after two days and autopsy revealed dilating myocarditis of unclear underlying cause. No causative pathogen could be identified.

Previous studies have shown that RA-patients are most often either seronegative or triple-positive for RF, ACPA and anti-CarP antibodies. Autoantibody measurements on sera of the post-COVID polyarthritis patients revealed a similar pattern (Figure 1A) with two patients being completely seronegative, and three patients positive for a range of autoantibodies. In all post-COVID samples, the percentage of ACPA IgG V-domain glycosylation was significantly increased compared to total IgG (Figure 1B), similar as in regular RA.

Conclusion: In conclusion, we found that the seroprevalence of ACPA is not increased post-COVID and that most patients presenting with polyarthritis after COVID-19 resemble regular RA patients, both regarding clinical phenotype and autoantibody characteristics. Although sample size and follow-up was limited, it appears that RA post-COVID may be coincidence rather than connected.

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DEPRESSION AND ANXIETY MIGHT NOT BE INCREASED DURING COVID-19 PANDEMIC IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Anxiety and depression are most common psychiatric disorders in chronic inflammatory rheumatic condition as well as axial spondyloarthritis (axSpA) (1). The prevalence of depression has been reported as 11-64% depending on the criteria used. Also self-reported depression and anxiety were found to be associated with disease activity and function in axSpA (1,2). It is observed that mental health is affected among healthy subjects during the COVID-19 pandemic, but this condition has not been systematically reviewed in axSpA patients.

Objectives: We aimed to compare frequency of self-reported depression and anxiety before and during the Covid-19 pandemic in patients with axSpA.

Methods: Seventy-six axSpA patients who were evaluated for the presence of depression and anxiety by using Hospital Anxiety and Depression scale (HADS) before pandemic were included in this study. All participants were classified according to the ASAS axSpA classification criteria. Patients were contacted by phone to participate and complete the HADS questionnaire. Demographic and disease related characteristics including BASDAI, BASFI and Patient Acceptable Symptom State (PASS) were recorded during interview. The HADS cut off value was taken as >7 in both groups to define the presence of anxiety or depression. Before and during pandemic period anxiety and depression scores were statistically compared.

Results: The demographic and disease related characteristics of axSpA patients with and without anxiety/depression were summarized in Table 1. The frequency of anxiety (43.4% vs %43.4; p>0.05) and depression (46.1% vs 44.7%; p>0.05) were found to be similar before and during pandemic period. Patients with anxiety (HADS>7) and depression (HADS>7) had higher BASDAI and BASFI scores and much less PASS positivity (Table 1). Although the frequency of depression was similar between before and during the pandemic period, symptom severity in depression was slightly increased during the pandemic (Figure 1).

Table 1. Patients' demographics and characteristics according to the presence of anxiety and depression

Variables	Presence of depression n:35	Absence of depression n:41	P	Presence of anxiety n:33	Absence of anxiety n:43	P
Age (years) mean ± SD	41.8±11.2	44.1±9.3	>0.05	42.0±10.9	43.6±10.0	>0.05
Male n(%)	21(60.0)	26(63.4)	>0.05	18(54.5)	29(67.4)	>0.05
Education time (years) mean ± SD	9.6±4.8	11.0±4.2	>0.05	9.7±5.0	10.6±4.1	>0.05
Current smoker n(%)	18(51.4)	15(36.6)	>0.05	15(45.5)	18(41.9)	>0.05
Alcohol consumption n(%)	12(34.3)	12(29.3)	>0.05	10(30.3)	14(32.6)	>0.05
Current BMI kg/m ² mean ± SD	26.0±4.8	26.8±4.5	>0.05	26.4±5.0	26.5±4.3	>0.05
Sleep time (hours) mean ± SD	7.6±1.7	7.6±1.3	>0.05	7.5±1.6	7.7±1.4	>0.05
Current BASDAI mean ± SD	2.5±1.6	1.4±1.6	<0.05	2.7±1.8	1.3±1.3	<0.001
Current BASFI mean ± SD	2.4±2.1	1.1±1.3	<0.05	2.4±2.0	1.2±1.4	<0.05
PASS positivity n(%)	16(45.7)	29(70.7)	<0.05	14(42.4)	31(72.1)	<0.05