Current depression and anxiety scores were correlated with disease activity (HADs Depression vs BASDAI $r:0.530$, $p<0.001$; HADs Anxiety vs BASDAI $r:0.500$, $p<0.001$) and function (HADs-Depression vs BASFI $r:0.519$, $p<0.001$; HADs-Anxiety vs BASFI $r:0.391$, $p<0.001$). These relationships were also observed in the pre-pandemic period (HADs-Depression vs BASFI $r:0.326$, $p<0.05$; HADs-Anxiety vs BASDAI $r:0.342$, $p<0.05$).

Conclusion: Depression and anxiety symptoms seems to be comparable before and after the COVID-19 pandemic. Regardless of this period, the presence of both depression and anxiety are associated with disease activity, function and less patient acceptable symptom state.

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Figure 1. Severity of depression and anxiety in AxSpA before and during COVID-19 pandemic

Figure 1.

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AB0670

THE COURSE AND OUTCOMES OF COVID-19 IN PATIENTS WITH ANCA-ASSOCIATED SYSTEMIC VASCULITIS, RECEIVING ANTI-B CELL THERAPY WITH RITUXIMAB

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Background: Currently, the issues of the effect of anti-B cell therapy on the risk of severe course of COVID-19 in patients (pts) with ANCA-associated vasculitis (AAV) has not been completely studied.

Objectives: We present an analysis of the COVID-19 incidence and outcomes in 126 AAV pts treated with rituximab (RTX) from one rheumatology center registry.

Methods: Data were collected with telephone/online surveying between 11-15th November 2020 from all 126 AAV pts (58- granulomatosis with polyangiitis, GPA; 38- microscopic polyangiitis, MPA; 22- eosinophilic granulomatosis with polyangiitis, EGPA (54% ANCA-negative); and 8- uncertain AAV). Pts age was 51 (20-81) yr, 62% women. Due to AAV activity or risk of relapse, during the pandemic RTX was prescribed in 48% pts.

Results: The incidence of COVID-19 in AAV pts was 3.5% during the first 3 months of the pandemic, the course was uneventful, and all pts recovered. Since September 2020 a 4-fold increase in the incidence alongside with more severe course of COVID-19 were reported. After 8 months of the pandemic, COVID-19 was diagnosed in 21 (16.6%) pts with median age 55 yr, 57% women. COVID-19 incidence was lower in GPA (15.5%) vs MPA (21.1%) or EGPA (27.7%). The mortality rate was 14.3% (2- MPA, 1- GPA). When analyzing the 5-year survival rate of AAV pts treated with RTX, prognosis worsening was noted; in 2020 there were 3 deaths due to COVID-19, in the previous 5 years- only 2 deaths.

Conclusion: Taking into account the fact the mechanisms of AAV and severe COVID-19 are largely synergistic (Table 1), primarily in the context of obstructive thromboinflammation as manifestation of acute inflammatory syndrome in COVID-19 [1], AAV can potentially contribute to the severe course of COVID-19. Anti-CD20 therapy seems to have a protective effect against severe COVID-19 [2], which, however, can be insufficient in AAV pts with active disease and multiple organ damage. Further analysis of COVID-19 cases in pts with AAV and other rheumatic diseases is exceptionally important.

Table 1. Comparison of AAV and severe COVID-19

Parameter	AAV	Severe COVID-19
Lung damage	High frequency of lung damage	Possibly destructive lung damage
Damage to other organs	Typically affects the upper and lower airways and kidneys; Other organs can be involved	Possible extrapulmonary localization
Vascular involvement	Systemic necrotizing vasculitis of small vessels; In the active phase, hypercoagulation High or very high	Obstructive thromboinflammation of the microcirculation of lungs and extrapulmonary vessels; Increased incidence of Kawasaki syndrome during the pandemic Very high
Inflammation Autoantibodies	ANCA pathogenetic role	Dominant extrafollicular B cell responses; Correlation between SARS-CoV-2 antibody titer and severity of COVID-19; High titers of IFN- α 2/ ω autoantibodies were noted; Netosis, the release of proteases from neutrophils promote the complement system activation, hypercoagulation, endothellitis, production of pro-inflammatory cytokines; An increase of neutrophils in the blood and broncho-alveolar lavage fluid were noted
Neutrophil	Neutrophils are the most important effector cells in the pathogenesis	Changes in the morphology of neutrophils were noted; Netosis, the release of proteases from neutrophils promote the complement system activation, hypercoagulation, endothellitis, production of pro-inflammatory cytokines; An increase of neutrophils in the blood and broncho-alveolar lavage fluid were noted
Complement	Complement is crucial in the pathogenesis; C5a receptor antagonist Avacopan efficacy	Activation of alternative/lectin complement pathways; C5 antagonist Eculizumab has been reported to be effective
Treatment	Immunosuppressants; In the active phase, anticoagulants	Anticoagulants; Glucocorticoids, pro-inflammatory cytokine antagonists, JAK inhibitors, cyclosporine
Prognosis	Serious	High mortality rate

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AB0671

NO EVIDENCE OF SARS-COV-2 IN THE KNEE JOINT: A CADAVER STUDY

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Background: Despite the considerable research efforts being made to learn more about COVID-19, little is known about the presence of SARS-CoV-2 genetic material in biological fluids other than respiratory droplets, blood, and feces^{1,2}. In particular, little is known about the presence of SARS-CoV-2 in the joints either *post mortem*³ or *in vivo*⁴. To the best of our knowledge, only López-Gonzalez *et al.*⁵ have published a description of acute arthritides occurring during hospitalisation due to COVID-19, and they did not find any SARS-CoV-2 genetic material in the patients' synovial fluid samples.

Objectives: The aim of this *post mortem* study was to assess the presence of SARS-CoV-2 RNA in the knee synovial fluid, synovial tissue, and bone tissue of COVID-19 patients in order to discover whether the joint is a possible route of transmission during orthopaedic surgical procedures, and clarify the possible role of SARS-CoV-2 as a directly arthritogenic virus.

Methods: *Post mortem* synovial fluid, synovial tissue and bone tissue samples were collected from the knees of five patients who died of COVID-19 in our hospital between September and October 2020, and analysed for the presence of SARS-CoV-2 using a commercial real-time polymerase chain reaction (RT-PCR) panel. Quantitative RT-PCR was used to test *post mortem* nasopharyngeal swabs of all of the patients.

Results: No SARS-CoV-2 RNA was detected in any of the knee samples, despite the positivity of the throat swab.

Conclusion: Our findings indicate that SARS-CoV-2 was not detected in knee synovial fluid, synovial membrane or bone. Therefore, our results suggest that all

healthcare professionals performing surgical procedures on the joints of COVID-19 patients are exposed to a risk of contagion due to exposure to respiratory droplets, blood and body fluids, but not to direct exposure to joint- or bone-related tissues. Furthermore, given that some case reports of arthritis in COVID-19 patients⁵⁻⁸ show that it is possible that COVID-19 patients display viral-mediated arthralgias and arthritis, the absence of the virus in the knee highlighted by our study suggests that it is unlikely that SARS-CoV-2 has a direct inflammatory action on the joint, but it could induce an inflammation-related reaction, manifesting as a reactive arthritis⁹.

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AB0672

PSYCHOLOGIC STATE OF PATIENTS WITH RHEUMATIC DISEASES AFTER THE OUTBREAK OF SARS-COV2

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Background: The ongoing Coronavirus-19 disease epidemic is a public health emergency of international concern which could pose a challenge to psychological resilience. This is mainly the case of patients with rheumatic diseases (RD).

Objectives: The aim of this study was to establish the prevalence of psychiatric symptoms in patients with RD and to identify factors associated with psychological stress.

Methods: A cross-sectional study was conducted among patients with RD. They were invited to respond to a survey designed to assess their psychological response after the outbreak of the SARS-COV2 pandemic. Mental health status after the Covid-19 was evaluated using the Depression and Anxiety Scale (DASS-21). The total depression subscale score was divided into normal (0–9), mild depression (10–12), moderate depression (13–20), severe depression (21–27), and extremely severe depression (28–42). The total anxiety subscale score was divided into normal (0–6), mild anxiety (7–9), moderate anxiety (10–14), severe anxiety (15–19), and extremely severe anxiety (20–42). The Impact of Event Scale-Revised (IES-R) is a 22-item self-administered questionnaire that assesses the post-traumatic state (PTS). A cut-off point of 33 provided the best diagnostic accuracy for PTS. The level of significance was fixed at 0.05.

Results: Sixty patients were included (42 with rheumatoid arthritis and 18 with spondylarthritis) with a mean age of 51.3 ± 13.1 years [18-75]. The majority of patients were women (63.3%), married (81.7%), with a household size of 3–5 people (67.9%). The mean disease duration was 11.9 ± 5.6 [1-23] years.

According to DASS depression score almost half of the patients (47%) suffered from depression, which was classified as severe in 10% of cases. The mean DASS anxiety subscale was 12.6 ± 8.2 [1-35]. The level of anxiety was mild in 23% of cases, moderate in 25% of cases, and severe in 23.3% of cases. The mean ILES-R score was 20.4 ± 10.2 [20-38]. Women experienced more PTS than men (26.3% vs 22.7%) without reaching a statistically significant correlation (p=0.9). Patients with higher education had lower IES-R, depression, and anxiety subscale scores as compared to those who were illiterate without a statistically

significant correlation (p=0.5, p=0.2, p=0.4 respectively). A positive correlation was found between anxiety score and IES-R (p=0.00). Other sociodemographic variables including disease duration, parental status, marital status, and household size were not associated with IES-R and DASS subscale scores (p>0.05).

Conclusion: Our study showed that many of our patients with RD experienced anxiety, depression, and PTS after the outbreak of Covid-19. Professional status as well as other sociodemographic data was not associated with psychological stress.

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AB0673

THE ROUTINE HEALTH CARE OF PATIENTS WITH RHEUMATIC DISEASES DURING THE PANDEMIC OF COVID-19

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Background: The coronavirus pandemic poses a great threat to patients with rheumatic diseases (RD). Because of the state of immunodepression, they are perceived as vulnerable and at high risk of contracting the virus. This may lead to a delay in the health care routine.

Objectives: The aim of our study was to assess the routine of patients with rheumatic diseases in the era of covid-19.

Methods: We conducted a prospective study after the outbreak of Covid-19 including patients with RD: rheumatoid arthritis (RA) and Spondylarthritis (SpA). All of them were invited to answer a questionnaire about adherence to protective measures, health services, hospital visits, treatment modalities, as well as the level of satisfaction with the medical support or information received for COVID-19. We also evaluated the post-traumatic state (PTS) with the Impact of Event Scale-Revised (IES-R). A cut-off point fixed at 33 provided the best diagnostic accuracy for PTS. The level of significance was fixed at 0.05.

Results: The study included 60 patients with a female predominance (sex ratio=1.7). The mean age was 51.3 ± 13.1 years [18-75] and the mean disease duration was 11.9 ± 5.6 [1-23] years. Forty-two patients had RA and 18 patients had SpA. The majority of respondents were women (63.3%), married (81.7%), with a household size of 3–5 people (67.9%). The mean DASS depression and anxiety subscale was 9.5 ± 7.6 [2-32] and 12.6 ± 8.2 [1-35] respectively. PTS was found in 25% of cases. Twenty-two patients stopped working in the second outbreak. The adherence to protective measures was as follows: compliance with lock-down (92.5%), adherence to stay home warnings (82%), wearing masks (96.3%), social distancing (68%), and washing hands immediately after sneezing (59.3%). Information was mainly sourced from both social media and the Internet in 78.2% of cases. Most of the patients were satisfied with the information provided and only 5 demanded more information about vaccination protocol. Of the patients having direct contact with a person affected with Covid-19 (20%), seven patients experienced symptoms. Three patients were diagnosed with SARS-COV2 and three other patients were hospitalized because of flares. The majority of the respondents (98.2%) had confidence in their own doctors' ability to recognize Covid-19. The majority of patients (91%) were afraid of getting sick and 83.1% feared stigma and discrimination after the infection. Fifty patients did attend their consultation appointment and 13.3% had a phone consultation. About a third of patients (26.7%) of patients experienced a delay in treatment. A positive correlation was found between marital status and the fear of other family members getting Covid-19 (p=0.029). Patients who did not consult experienced more PTS and severe anxiety than those who did not delay hospital visits (p=0.07, p=0.04 respectively).

Conclusion: Our study showed that during the outbreak of Covid-19, patients with RD exhibited a high level of protection towards the virus. Despite these precautionary measures, a delay in hospital routine was observed.

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AB0674

RAPID ADOPTION OF TELEMEDICINE IN RHEUMATOLOGY TRAINING: RESULTS FROM THE COVID-19 GLOBAL RHEUMATOLOGY ALLIANCE TRAINEE SURVEY

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