less than 24 hours could not participate in the study. The use of other monocolonal antibodies and glucocorticoids for the treatment of COVID-19 were not allowed. Subjects were stratified according to the CRP level (CRP ≤ 7 mg/L; CRP > 7 mg/L) and randomized (1:1) into 2 groups: receiving LVV 324 mg or placebo. LVU placebo were administered as a single subcutaneous injection, investigator and patients were unaware of the received therapy.

Among secondary endpoints of the study changes from baseline in ESR, CRP and IL-6 concentrations were assessed. CRP level and ESR were measured before the IP administration and on Days 3, 5, 7, 14, 21, 29 and 30. Blood samples for the measurement of IL-6 concentration were obtained before the IP administration and then every day for 2 weeks after administration.

Results: We observed the pronounced decrease of ESR in LVL group compared to Placebo group. The difference was statistically significant on Day 3 and 7: the median ESR change from baseline was -3 mm/h and -3 mm/h on Day 3, -11 mm/h and -3.1 mm/h on Day 7, in LVL and Placebo groups, respectively (p=0.0319 and p=0.0100, Days 3 and 7). The statistically significant difference in the change of CRP level was detected between the groups on Day 3: -26.6±4.9 mg/mL and -19.2±5.8 mg/mL in LVL and Placebo groups, respectively (p=0.0241). Numerically the same dynamics of ESR and CRP was observed over entire study period.

The dynamics of IL-6 serum concentrations in LVL and Placebo groups was strikingly different. After LVL administration we detected the rapid significant increase in IL-6 concentration due to IL-6 receptors inhibition. Maximum change from baseline was observed on Day 3 (+91.9±117.7 pg/mL), while on Day 14 the value was +31.9±6.27 pg/mL.

In the Placebo group, the IL-6 concentration increased slightly until Day 4 (+5.1±7.65 pg/mL), and then decreased significantly (-39.2±55.1 pg/mL on Day 14) due to clinical improvement in this group.

Conclusion: The significant differences in the dynamics of ESR, CRP and IL-6 after LVL administration compared to placebo confirmed the pharmacodynamic effect and its potency to prevent the excessive release of inflammatory substances in severely ill COVID-19 patients.

REFERENCES:

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**POS1215**

INFLUENCE OF CONFINEMENT CARRIED OUT BY PATIENTS WITH AUTOIMMUNE AND IMMUNE-MEDIATED INFLAMMATORY DISEASE WITH BIOLOGICAL TREATMENT ON COVID-19 INFECTION

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Background: The disease caused by SARS-CoV-2 is a potentially serious infection. The autoimmune and immune-mediated inflammatory disease (AI/IMID) itself, its activity, the immunosuppression and the presence of comorbidities are associated with an increased risk of serious infections. At this moment the literature shows a similar risk of infection and severity compared to the general population. Some reports noted that these patients might adopt stricter measures of self-care protection than general population which could contribute to an incidence of infection lower than expected.

Objectives: To assess the incidence and clinical presentation of SARS-CoV-2 infection in our cohort of patients with AI/IMID treated with biological agents (BA) or Janus Kinasa (JAK) inhibitors. To analyse the association of the incidence and the type of confinement between the AI/IMID group and the general population.

Methods: A case-control study nested within a retrospective observational study was conducted from March 13th until April 23rd, 2020 in Althaia, Xarxa Assistencial Universitària de Manresa. Subjects, cohort of AI/IMID patients followed by Rheumatology (inflammatory arthritis), Dermatology (psoriasis) and Gastroenterology (inflammatory bowel disease) treated with BA/JAK inhibitors. Controls were selected from our Primary Care Centers. Main outcome: Type of confinement: strict (<1 outing / week with safety measures (SM), regular (2-3 outings with SM), lax (> 3 outings or face-to-face work with SM) and without confinement (without (SM)). Secondary outcome: SARS-CoV-2 infection: confirmed (PCR and/or positive serology), probable (severe illness requiring admission without PCR/serology or mild moderate with epidemiological contact) and possible (mild infection without microbiological check or epidemiological contact); as well as severity according to the WHO.

Results: 367 patients and 193 controls were included. 45.2% of patients were men, with a mean age of 52 (SD 14.6). 47.4% were patients with rheumatologic disease, 25.3% from dermatology and 27.2% from digestive. 95.6% received a BA (66.6% anti-TNF and 33.4% non-anti-TNF) and the remaining 4.4% received JAK inhibitors. 43.3% patients had at least a risk factor compared to 37.8% in the control group (p=0.761). The Table 1 shows the incidence of COVID divided into confirmed and cumulative cases (confirmed and possible), with no significant differences. One patient (0.3%) in the case group and 3 patients (1.6%) in the control group required hospital admission (p=0.121). In relation to the type of confinement we had significant differences (p=0.013) within the AI/IMID group versus the control group in lax confinement. There were no differences in the incidence of COVID between the different confinement types.

<table>
<thead>
<tr>
<th>Type of confinement</th>
<th>Case (n=367)</th>
<th>Control (n=193)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARS-CoV-2 infection</td>
<td>10.1 (7.2-13.6)</td>
<td>13.5 (9.0-19.1)</td>
<td>0.228</td>
</tr>
<tr>
<td>Cumulative COVID</td>
<td>3.3 (1.5-5.6)</td>
<td>5.7 (2.9-10.0)</td>
<td>0.169</td>
</tr>
<tr>
<td>Probable</td>
<td>2.2 (0.9-4.2)</td>
<td>3.1 (1.1-6.8)</td>
<td>0.572</td>
</tr>
<tr>
<td>Possible</td>
<td>4.6 (2.7-7.3)</td>
<td>4.7 (2.1-8.7)</td>
<td>0.987</td>
</tr>
<tr>
<td>OR (95% CI)</td>
<td>1.40 (0.89-1.99)</td>
<td>1.06 (0.65-1.73)</td>
<td>0.013</td>
</tr>
</tbody>
</table>

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**POS1216**

SYMPTOM RATES, ATTITUDES AND MEDICATION ADHERENCE OF RHUMATIC AND MUSCULOSKELETAL DISEASE PATIENTS DURING THE SARS-CoV2 PANDEMIC

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Background: SARS-CoV-2 has caused over two million deaths globally. The relationship between rheumatic and musculoskeletal disease (RMDs), immunosuppressive medications and COVID-19 is unclear.

Objectives: This study explores the rates of COVID-19 symptoms and positive tests, DMARD adherence and attitudes to virtual clinics, amongst RMD patients.

Methods: An online population survey was disseminated via the Arthritis Ireland website and social media channels.

Results: There were 1381 respondents with RMD, 74.8% were on immunosuppressive medication. COVID-19 symptoms were reported by 3.7% of respondents of which 0.4% tested positive, no different from the general population at that timepoint. The frequency of COVID-19 symptoms was higher for respondents with spondyloarthropathy [odds ratio (OR) 2.06, 95% CI: 1.14, 3.70] and lower in those on immunosuppressive medication (OR 0.48, 95% CI: 0.27, 0.88), and
those compliant with health authority (HSE) guidance (OR 0.47, 95% CI: 0.25, 0.89). Adherence to RMD medications was reported in 84.1%, with 57.1% using health authority guidelines for information on medication use. Importantly, adherence rates were higher amongst those who used guidelines (89.3% vs 79.9%, P < 0.001), and conversely lower in those with COVID-19 symptoms (64.0% vs 85.1%, P < 0.009). Finally, the use of virtual clinics was supported by 70.4% of respondents.

**Conclusion:** The rate of COVID-19 positivity in RMD patients was similar to the general population. COVID-19 symptoms were lower amongst respondents on immunosuppressive therapy and those adherent to medication guidelines. Respondents were supportive of HSE advice and virtual rheumatology clinics.

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**POS1217 THE PATTERN OF COVID 19 PANDEMIC AMONG PATIENTS WITH AUTOIMMUNE INFLAMMATORY RHEUMATIC DISEASES (AIIRD)**

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**Background:** The epidemiology of COVID19 among patients with AIIRD may be influenced by a dysregulated immune system, immunosuppressive therapies and behavioral patterns. Data regarding the epidemiology of COVID19 among patients with AIIRD is scarce.

**Objectives:** To assess the pattern of COVID19 pandemic among patients with AIIRD compared to the general population in Israel

**Methods:** At the beginning of the COVID-19 pandemic, we established a national registry of patients with AIIRD, diagnosed with COVID-19, based on voluntary reporting by the treating rheumatologist. All the members of the Israeli Society of Rheumatology were encouraged to participate and repeatedly reminded to report any new cases. Rheumatology centers from 11 hospitals from the Northern and Central part of Israel participated in this study. The registry included demographic data, AIIRD diagnosis and duration, systemic organ involvement, co-morbidities, treatment (conventional synthetic disease modifying drugs (csDMARDs), biologic/targeted (b/ts) DMARDs, corticosteroids use, date of COVID19 diagnosis, severity of the viral disease and complications, duration of hospitalization, if required; treatment for COVID 19, laboratory results and outcome. The diagnosis of COVID 19 was made by a positive SARS CoV2 PCR. The indicators for SARS CoV2 PCR testing in Israel comprise clinical symptoms or exposure to a confirmed close contact. Severe illness was defined by SpO2 <94% in room air, respiratory rate of >30 breaths/min, PaO2/FIO2 <300 mmHg, or lung infiltrates >50% on chest imaging.

The epidemiological data regarding the number of COVID19 confirmed patients, the number of severe cases and the rate of mortality among the general population per day and per week, were extracted from the data dashboard of the Israeli Ministry of Health. We analyzed data from 02.2020 to 15.01.2021.

**Results:** During the study period we experienced 3 waves of COVID 19 pandemic. The governmental management of COVID19 spread, at the beginning of the pandemic, included enforcement of severe travel restrictions and social distancing, followed eventually by a preventive lockdown, in spite of the relatively low number of cases. Easing of the restrictions, lifting the travel ban, opening of the commerce and schools led to 2 much more severe waves, which triggered 2 new lockdowns. Up to January 2021, 549763 Israelis had confirmed COVID19, 30% of whom had severe disease, 0.84% died (30% of the patients with severe disease).

We identified 190 AIIRD patients (mean(SD) age: 52(18), 80% males) who had confirmed COVID19. The weekly incidence curve of patients with rheumatic diseases correlated with the curve of the general population (Figure 1).

Sixty-one % of the patients with AIIRD received csDMARDs, 41% were on b/tsDMARDs, 39% on chronic corticosteroids, 12% on ≥10mg prednisone. Forty-seven% of patients required hospitalization, 20% had severe COVID19. Sixteen patients (42% of patients with severe COVID19) (mean(SD), median age 64.7(15,4),67) died (systemic sclerosis-4 patients, rheumatoid arthritis – 6, systemic lupus erythematosus – 2, antiphospholipid syndrome-2, granulomatous polyangitis -1, polymyalgia rheumatica-1). The AIIRD was active in 56% of them, received csDMARDs, none of them were on b/tsDMARDs, 31% received chronic prednisone>10mg. All patients who died had at least 2 comorbidities.

**Conclusion:** The pattern of spread of COVID19 in AIIRD patients is similar to the general population despite repeated mass media alerts for enhanced social distancing for elderly and immune suppressed patients. The disease tends to be more severe with enhanced mortality, especially in those with active AIIRD disease and organ involvement (lungs, heart, renal), older age and co-morbidities. A reporting bias cannot be excluded.

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**POS1218 SAFETY AND EFFICACY OF ANAKINRA IN SEVERE SARS-COV2 INFECTION (COVID19) AT A TERTIARY HOSPITAL**

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**Background:** SARS-CoV2 virus is a novel coronavirus that causes COVID-19 disease, which in its most severe form produces life-threatening atypical pneumonia and ARDS. Coronaviruses induce dysregulation of the immune system resulting in a cytokine storm syndrome with activation of the macrophage mediated mainly by IL-1 and IL-6. Although there is no specific treatment to date, researchers have explored novel approaches through targeting both IL-6 and IL-1. Anakinra is a recombinant human IL-1 receptor antagonist that prevents IL-1β and IL-1α binding and therefore blocks signal transduction. Its high bioavailability, rapid action, relatively short half-life and good safety profile make it a promising drug.

**Objectives:** Analyse the experience of administering Anakinra for severe forms of COVID19 in patients hospitalised at a tertiary hospital.

**Methods:** Retrospective single-center study in which all patients admitted for COVID-19 and treated with Anakinra from April 1st to the end of the 1st wave...