Information about the course of COVID-19 in patients with certain rheumatic diseases is still lacking.

Objectives: To examine clinical course of COVID-19 in patients with Sjogren's syndrome treated with anti-CD20 monoclonal antibody (rituximab).

Methods: Single center observational study. Diagnosis of SjS was based on ECR/EULAR 2016 criteria. COVID-19 diagnosis was based on positive PCR test even without clinical symptoms and/or typical clinical features (CT signs, fever and anosmia). Rituximab was administered in two 1000mg infusions 14 days apart for the 1st course, then 500mg every 6 months.

Results: 19 patients were included, 18 women and 1 man. Median age was 55 years (29-70 years), and median rituximab treatment duration was 24 months (1-48 months). Five patients had concomitant RA (2 patients), SLAE (1 pt), Systemic sclerosis (2 patients). Patients with RA took baricitinib and methotrexate as well. 3 patients had MALT-lymphoma anamnesis (24, 38 and 24 months before the diagnosis of COVID-19). Only 3 patients had chronic ischemic heart disease and/or arterial hypertension. 12 patients were PCR positive, 6 negative and in 1 the test was not done. 11 patients had full and 4 partial B-cell depletion in peripheral blood. Five patients had <20% lung involvement on CT, 2 patients – 20-40% and 4 patients – 40-60%. Three patients with 40-60% lung involvement required hospitalization due to marked shortness of breath and long febrile period, 2 of them received anti-IL6 treatment and neither of them required mechanical lung ventilation (either non-invasive or invasive). Seventeen patients were treated at home and recovered in 10-24 days. Anti-SARS-CoV-2 IgG were measured in 9 patients, 6 (66.7%) of them were positive.

Conclusion: It seems that neither SjS itself nor anti-CD20 therapy predisposes patients to severe course of COVID-19. Presumably risk factors such as age, diabetes or anamnesis of cardiovascular diseases have far more significant impact on COVID-19 severity. Data hints that anti-CD20 therapy might negatively affect the formation of specific anti-SARS-CoV-2 humoral immunity, but further investigation is required to determine that with any degree of certainty.

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POS1227

IMPACT OF A PRE-EXISTING INTERSTITIAL LUNG DISEASE ON SEVERITY OF COVID-19 IN PATIENTS WITH RHEUMATIC AND MUSCULOSKELETAL DISEASES

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Background: COVID19 due to SARS-CoV-2 infection implies an important anti-viral immune response leading to a major inflammatory syndrome with increased pro-inflammatory cytokine levels (i.e. the cytokine storm paradigm). The impact of a preexisting interstitial lung disease (ILD) on the morbi-mortality of COVID-19 is unclear. An increased mortality rate has been identified in studies that included a limited number of patients with ILD from various etiologies. To date, no studies have investigated the severity of COVID-19 in patients with preexisting ILD in a large population of rheumatic and musculoskeletal diseases (RMD-ILD). Since March 18th, 2020, the French RMD COVID19 dataset (NCT04353609) includes patients with an RMD and SARS-Cov-2 infection.

Objectives: To assess the impact of a preexisting ILD on COVID-19 morbi-mortality within the French RMD COVID-19 dataset.

Methods: Patients from the French RMD COVID-19 dataset were included in the analysis. COVID-19 diagnosis was established by a positive SARS-CoV-2 PCR test and/or typical symptoms or chest CT scans pattern during the period of the pandemic. Baseline phenotypic characteristics of the RMD including pre-existing ILD prior to the SARS-CoV-2 infection were collected. COVID-19 evolution was characterized as benign (ambulatory care), moderate (hospitalization outside intensive care unit [ICU]) and severe (hospitalization in ICU). Association between the ILD status and the severity and mortality rate of COVID-19 was assessed using multivariable logistic regression adjusted on sex, age, body mass index and diabetes.

Results: By June 26, 2020, 897 patients were included. Pre-existing ILD was reported in 27 patients (3%): 11 patients with systemic sclerosis, 8 with rheumatoid arthritis, 2 with auto-immune myositis, 2 with mixed connective tissue disease and 4 with other RMD. Among these 27 patients (11 male, mean age 63.1 ± 16.4 y/o, 56.5% having a usual interstitial pneumonia HRCT pattern), 22 had severe infection. Death related to COVID-19, was observed in 58 patients with RMD without ILD (7.1%) and in 10 patients with RMD-ILD (37%). Having a preexisting ILD was found to be independently associated with an increased risk of severe COVID-19 (adjusted OR=7.6 [2.9 – 20.2], P<0.001) and an increased mortality rate (adjusted OR=12.3 [3.8 – 39.2], P<0.001).

Conclusion: In RMD patients with SARS-CoV-2 infection, preexisting ILD was associated with an increased risk to severe COVID-19 and related mortality. Our

findings suggest that RMD-ILD patients should be prioritized for COVID-19 vaccination according to the high morbi-mortality rate during SARS-CoV-2 infection.

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POS1228

THE ROLE OF CHEST CT IN UNDERSTANDING INTERSTITIAL LUNG DISEASE (ILD): SYSTEMIC SCLEROSIS (SSC). VERSUS COVID-19

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Background: COVID-19 pandemic is a global emergency which may overlap on the clinical and radiological scenario of ILD in SSC. In clinical practice, the striking similarities observed at computed tomography (CT) between the diseases make it difficult to distinguish a COVID-19 superinfection from a progression of SSC-ILD.

Objectives: The aim of our study was to identify the main CT features that may help distinguishing SSC-ILD from COVID-19 pneumonia.

Methods: 22 international readers were included and divided in the radiologist group (RAD) and non-radiologist group (nRAD). The RAD group included non-chest RAD and chest-RAD. A total of 99 patients, 52 with COVID-19 and 47 with SSC-ILD, were included in the study.

Results: Fibrosis inside focal ground glass opacities (GGO) in the upper lobes; fibrosis in the lower lobe GGO; reticulations in lower lobes (especially if bilateral and symmetrical or associated with signs of fibrosis) were the CT parameters most frequently associated with SSC-ILD. The CT parameters most frequently associated with COVID-19 pneumonia were: consolidation (CONS) in the lower lobes, CONS with peripheral (both central/peripheral or patchy distributions), anterior and posterior CONS and rounded-shaped GGOs in the lower lobes. After multivariate analysis, the presence of CONS in the lower lobes (p <0.0001) and signs of fibrosis in GGO in the lower lobes (p <0.0001) remained independently associated with COVID-19 pneumonia or SSC-ILD, respectively. These two variables were combined in a predictive score which resulted positively associated with the COVID-19 diagnosis, with 96.1% sensitivity and 83.3% specificity: 3 different risk class for COVID-19 pneumonia may be identified: high risk for COVID-19 pneumonia (5-9 points); probable overlap COVID-19 pneumonia in SSC-ILD (4 points); low risk for COVID-19 pneumonia (0-3 points).

Conclusion: The CT differential diagnosis between COVID-19 Pneumonia and SSC-ILD is possible and may be fostered in practice by the use of a