PO.8.170 DRUG-INDUCED LUPUS OR SYSTEMIC LUPUS ERYTHEMATOSUS AFTER EXPERIMENTAL COVID-19 THERAPY: DIFFICULTIES IN DIFFERENTIAL DIAGNOSIS

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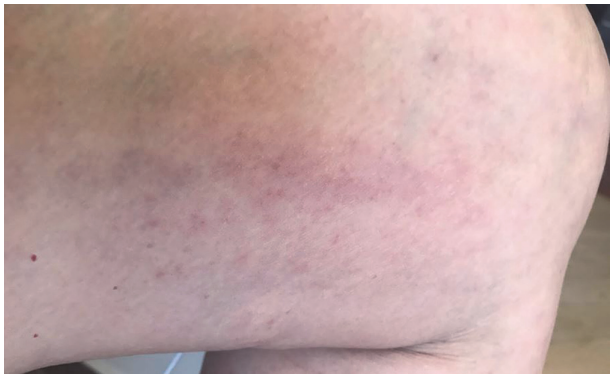
10.1136/lupus-2022-elm2022.189

Purpose to present the case of drug-induced lupus erythematosus (DIL) developed after experimental therapy with a combination of monoclonal antibodies against the SARS-CoV2 surface S-protein.

Methods Patient L., 60 y.o. In 2018, symmetric arthritis of the hand joints appeared for the first time, the X-ray showed no erosions. The provided tests: ANA - negative, ACCP, RF, ESR and CRP - normal. The patient was diagnosed with seronegative rheumatoid arthritis (DAS28 4,7) and prescribed methotrexate (MT) with escalation to 22.5mg/week - arthritis has resolved. In 2020 arthritis recurred, MT was substituted by leflunomide (LEF) 20mg/day and methylprednisolone (MP) 4mg/day with positive effect but in 2021 polyarthritis relapsed. MP IV was prescribed at a total dose 1250mg, sulfasalazine (SS) 1g/day and hydroxychloroquine (HCQ) 200mg/day were added, MT was returned in a dose 15mg/week, oral MP 2mg/day was also continued with a gradual decrease until withdrawal. However, gastralgia and hair loss appeared - SS was canceled. Due to persisting arthritis, MT and HCQ were increased to 25mg/week and 400mg/day respectively. In January 2022, the patient had a mild COVID-19 (positive test by RT-PCR), a CT of the lungs without pathology. On 23.01.2022, she underwent therapy with a combination of monoclonal antibodies against the SARS-CoV-2 surface S-protein (Bamlanivimab 700mg + Etesivimab 1400mg) by IV single dose as part of a clinical trial. After discharge, in March 2022, she noted the onset of a urticaria-like rash.

Results At the time of hospitalization in April 2022, arthritis of the hand joints, urtic rash with a hemorrhagic component were detected. Laboratory parameters: CRP 6.2mg/L (0–5), ANA 1/320cytopl, anti-dsDNA 200IU/ml (0–25), anti-C1q 24.4IU/ml (0–10), C3 0.83g/L (0.9–1.4). The indices of general, biochemical blood tests, urinalysis - no deviations. According to echocardiography no signs of cardiac envelope lesions were revealed. The patient meets the criteria of systemic lupus erythematosus (SLE) SLICC 2012. However, taking into account chronological relationship with monoclonal antibody injection, late age of disease onset and absence of visceral organ involvement, the current working diagnosis is DIL with skin lesions (anti-C1q vasculitis), arthritis and immunological abnormalities. Therapy: MP 4mg/day, MP IV 1500mg total, HCQ 400mg/day, MT 25mg/week with positive effect - reduction of arthritis and rash elements.

Conclusion DIL is an autoimmune phenomenon with clinical and laboratory manifestations similar to those of SLE, chronologically associated with the intake of drugs and regressing after their withdrawal. There are a lot of cases of development of DIL on therapy with monoclonal antibodies, mainly TNF-α inhibitors. However, no cases of DIL after treatment with a 'cocktail' of monoclonal antibodies to the SARS-CoV-2 surface protein have been described in the literature. The use of drugs can also lead to the development of SLE, which is difficult to distinguish from DIL at the initial stage. Thus, careful dynamic follow-up of the patient is necessary for final verification of the diagnosis.



Abstract PO.8.170 Figure 1

PO.8.171 CHANGES IN FOLLOW-UP ACTIVITIES IN SLE PATIENTS DURING THE COVID-19 PANDEMIC AND ITS IMPACT ON HEALTH OUTCOMES

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10.1136/lupus-2022-elm2022.190

Purpose To measure the changes in follow-up activities in patients with SLE during the COVID-19 pandemic and evaluate its impact on health outcomes.

Methods We extracted data of all patients under treatment of a rheumatologist or internist in both 18 months before as during the COVID-19 pandemic (study period ranged from 01-09-2018 to 01-09-2021, March 2020 is considered the start of the COVID-19 pandemic) with a billing code 'SLE' and of whom ACR'97 criteria were manually checked. In these patients we described the absolute frequency of blood analyses and urinalyses as well as the relative amount of abnormal values. Furthermore, we described frequency of consultations (percentages of face-to-face consultations), hospital admissions, ER visits and intensification of medical therapy. Intensification of therapy was defined as the start or increase in dosage of corticosteroids or start of disease-modifying anti-rheumatic drugs, including azathioprine, mycophenolate mofetil, methotrexate, leflunomide, ciclosporin A, belimumab, rituximab and cyclophosphamide.

Results The frequency of follow-up activities in the selected 152 SLE patients is shown in table 1. During the pandemic the overall frequency of blood analyses decreased with a median of once every 105 days pre-COVID-19 (IQR 23–580) to once every 119 days during COVID-19 (IQR 24–580). However, this difference was not statistically significant. For urinalysis a similar non-significant decrease in frequency was visible, with a median of 122 days pre-COVID-19 (IQR 26–580) to 132 days during COVID-19 (IQR 21–580). In general, consultation frequency did not change significantly before and during COVID-19. However, there was a significant decrease in face-to-face consultations; replaced by consultations by telephone (with the possibility of video calling). Diminished face-to-face contact did not result in changes in patient

outcomes, as the relative frequency of abnormal values for blood work and urine remained stable and the amount of escalations in medical therapy was correspondent between both periods, as shown in table 2.

Conclusions The fact that the amount of abnormal values and therapy escalations was similar before and during the COVID-19 pandemic, while diagnostic tests and face-to-face contacts decreased, suggests that physicians are quite capable of making choices when faced with relative scarcity.

PO.8.172 DISEASE ACTIVITY AT THE TIME OF BIOPSY IS NOT ASSOCIATED WITH HIGHER RISK OF SERIOUS INFECTIONS IN PATIENTS WITH LUPUS NEPHRITIS

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10.1136/lupus-2022-elm2022.191

Purpose Systematic lupus erythematosus (SLE) and lupus nephritis (LN) are associated with a higher frequency of serious infections compared to the general population which are in turn associated with adverse outcomes, morbidity and mortality. Very few studies have explored risk factors for infections in these patients and, to the best of our knowledge, there are no studies examining the association with disease activity and serious infections.

Methods We have conducted a retrospective cohort study to evaluate the prognostic significance of disease activity for serious infections in LN. Disease activity was assessed using the Systemic Lupus Erythematosus Disease Activity Index 2000 (SLEDAI-2K). Serious infections were defined as those that: 1. require intravenous therapy OR 2. lead to hospitalization OR 3. have resulted in death in 30 days from diagnosis. SLE was diagnosed using the American College of Rheumatology criteria.

Results A total of 51 patients with biopsy-proven LN were followed up for 4.5±2.9 years (80% women, mean age at biopsy 38±14). Of these, 22 (43%) had at least one episode of serious infection with 4 patients having 2 episodes for an incidence of 5.7 infections per year of follow-up. Most common sites of infection were pneumonia (N=6), urinary tract infections (N=5), gastrointestinal infections (N=4) and skin infections (N=2). Five patients had sepsis with one progressing to septic shock and two patients died. Disease activity was higher at the time of biopsy compared to at the time of infection/up to one month prior to infection (15.4±6.3 vs. 11.3 ±5.5, p=0.001). There was no difference between either disease activity at the time of biopsy (18.0±1.0 vs. 15.5±6.5, p=0.36) or at the time of infection/preceding infection (12.0 vs. 11.25, p=0.90). SLEDAI-2K damage index at the time of biopsy was not an independent predictor of serious infection (OR 0.88 [0.72, 1.08]).

Conclusions Serious infections are common in LN with nearly half of the patients having at least one episode. While high disease activity indices are important markers of immune-mediated damage, more serious disease and adverse outcomes, SLEDAI-2K at the time of biopsy was not an independent predictor of serious infections in our cohort of patients with LN.

PO.8.173 LUPUS NEPHRITIS AND COVID 19 : A CASE REPORT

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10.1136/lupus-2022-elm2022.192

Background Covid-19 infection poses a serious challenge for immune-compromised patients with inflammatory autoimmune systemic diseases. This is likely due to a combination of immune dysfunction, immunosuppressive therapy and excess co-morbidities.

Patients with systemic lupus erythematosus (SLE) are at increased risk for severe cases of COVID 19 and short term outcomes, such as hospitalization, venous thromboembolism.

Purpose we report the severe outcomes of COVID 19 infection among a patient with an underlying lupus nephritis.

Methods we present the case of a young female with a past medical history of lupus nephritis who was admitted to the internal medecine unit during COVID 19 pandemic.

Results We report the case of a 35 year old female, with underlying lupus nephritis associated to CKD, secondary jogren's syndrome who complaints of fever, persistent cough, dyspnea and lower limb weakness. The patient medication included hydroxychloroquine, a high dose of oral steroid (80mg per day). The patient was obese (BMI :30 kg/m^2) , and had a minor respiratory distress (SaO2 was 82% on room air, respiratory rate at 32 cy/mn). Examination identified weakness in lower limbs and areflexia, no deep venous thrombosis signs.

The result of laboratory tests showed pancytopenia, high C reactive protein, hepatic cytolisis without signs of liver failure. Computed tomography of the chest showed ground glass opacities of both lungs (50–75%). SARS-Cov-2 was detected in the nasal swab by RT-PCR test. Lumbar puncture revealed a high CSF protein with normal cell count and negative cultures.

Investigations were consistent with polyradiculonevritis and additional COVID-19 (SARS-CoV-2) infection. The patient received non invasive ventilation dual oxygen therapy , high dose of heparin, antibiotics and physiotherapy.

The patient recovered after 2 weeks and showed signs of motor improvement 2 months after admission.

Discussion Among patients with SLE, those who contracted COVID 19 had significant increased risks for mortality, mechanical ventilation, ICU admission and hospitalization respectively compared with those without COVID 19. The presence of lupus nephritis, compared with its absence, was associated with significant and increased risks for hospitalization, sepsis, and AKI. It was found that lupus nephritis was the only predictor of severe to critical COVID 19 in SLE.

Conclusion This case illustrates the severe prognosis among patients with SLE and specially those with a lupus nephritis. This is an important alert to those caring for patients with SLE, and a reminder of the importance of preventive measures, such as vaccines, during a pandemic for this population.