(HRQoL) was assessed with the SLE-specific LupusQoL and the generic EQ-5D-5L. Disease activity and organ damage were assessed with the Systemic Lupus Activity Questionnaire (SLAQ) and Self-Administered Brief Index of Lupus Damage (SA-BILD), respectively. Non-adherence was defined as <80% adherence according to CQR or MASRI. The CQR and the MASRI were investigated for linear relationship with Spearman's rank correlation test. Odds ratios and 95% confidence intervals were estimated using logistic regression, with non-adherence as the outcome variable. Predictors that were investigated included country of birth, disease duration, living situation, employment status, education level, BMI, smoking status, HRQoL, and beliefs in medications. The odds ratios were adjusted for age, sex, damage, and disease activity.

Results Two hundred and five patients participated in our survey study; 45.9% (N=94) were on five medications or more i.e., polypharmacy. Most patients (66.8%) were non-adherent to their medications when assessed with CQR. However, only 6.6% and 6.3% were non-adherent to AMA or GCs respectively according to the MASRI. Adherence levels assessed by CQR showed a moderate linear relationship with those assessed using MASRI for both AMA (ρ=0.47; P<0.001) and GCs (ρ=0.34; P<0.001). The average age was 52, 86% were female and most of the patients were on AMAs (Table 1). Belief in the necessity of a specific medication and positive beliefs in medications in general were associated with adherence to GCs (Table 2). Concerns regarding specific medications and believing that medications are generally overused and harmful had a negative association with overall medication adherence. The other predictors were not associated with medication adherence.

Conclusions Our findings show that patients' beliefs in medications may overall impact medication non-adherence. Adherence levels based on MASRI and CQR were not strongly correlated, suggesting that these two instruments capture different aspects of adherence.

REFERENCE

1. Mehat, *et al*. 2017.

Friday 07 October 2022 from 08:30 to 09:30

S05 covid & infections

S05.1 EFFICACY AND SAFETY OF THE ANTI-SARS-COV-2 BNT162B2 VACCINE AMONG SLE PATIENTS: THE COVALUS PROJECT

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10.1136/lupus-2022-elm2022.11

Purpose Vaccination in patients with autoimmune disease like systemic lupus erythematosus (SLE) raises a special concern because its impact on autoimmunity remains partially unknown. While clinical data from large cohort are reassuring [1], very little has been described on the post vaccination immune system reaction. Besides, long-term efficacy of the vaccine, especially regarding T-cell response has not been evaluated in detail.

Methods We conducted a prospective observational study that included all the adult SLE patients vaccinated by the BNT162b2 anti-SARS-CoV-2 vaccine in a single tertiary medical center in Paris. We evaluated the efficacy and the safety of the vaccine just before the first dose and then one month (M1), three months (M3) and six months (M6) later. Apart from the standard clinical and biological follow-up, we measured, at each time, the proportion of plasmacytoid dendritic cells (PDCs) producing interferon-α (IFN-α) using intracellular flow cytometry staining. We quantified the activation of autoimmune T cells at each visit by stimulating the peripheral blood mononuclear cells (PBMCs) with nuclear antigens and quantifying the proportion of activated (CD154+ CD69+) among non-naïve (CD45-RA -) CD4 T cells. We also evaluated the anti-SARS-CoV-2 T cell response by an Interferon Gamma Release Assay (IGRA) test.

Results We included 57 SLE patients and 11 healthy volunteers (HV) vaccinated by the BNT162b2 vaccine according to the French national recommendations. SLE patients were mostly female (49/57, 86.0%) with a median [IQR] age of 44.0 [38.1–50.8] years and a time since SLE diagnosis of 10.8 [4.2–19-8] years. Their treatment regimen was heterogeneous: 47/57 (82.5%) received hydroxychloroquine; 35 (61.4%) steroids, and 10 (17.5%) were on another immunosuppressive drug (mycophenolate mofetil, azathioprine or rituximab). We observed only one clinical SLE flare during the post vaccination follow-up. Except for this patient, we observed no modification in the anti-dsDNA titer among SLE patients. At M3 compared to T0, we observed more PDCs producing INF-α in the SLE group: 1.17% [0.72–1.77] vs 0.68% [0.34–1.18], p=0.002 but not in the HV group. The proportion of non-naïve CD4 T cells activated (CD154+ CD69+) by the nuclear antigens did not change after vaccination. Regarding the T cell response, we observed that 71% of the SLE patients had a positive IGRA test at M3, whereas at M6, only 36% of them had a positive IGRA test. The antiviral T cell response correlated well with the humoral response: there was no patient with negative anti-Spike serology and positive IGRA and 78% of patients with a positive serology had a positive IGRA test.

Conclusion We observed that BNT162b2 vaccine had a mild impact on innate and adaptative immunity on SLE patients. The antiviral T cell response was well correlated to the humoral anti-Spike response and decreased significantly from M3 to M6.

S05.2 RISK OF COVID-19 INDUCED SYSTEMIC LUPUS ERYTHEMATOSUS FLARE: ANALYSIS OF THE AP-HP CLINICAL DATA WAREHOUSE

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10.1136/lupus-2022-elm2022.12

Purpose Because of the involvement of type 1 interferon (IFN-1) in the pathophysiology of both systemic lupus erythematosus (SLE) and COVID-19 immune response, a risk of

Abstract S05.2 Table 1

	No SLE flare post COVID-19 n=76	SLE flare post COVID-19 n=14	Univariable OR [CI 95]
DEMOGRAPHICS			
Male sex, n (%)	4 (5.2)	2 (14.3)	2.91 [0,4-16,8]
Age during COVID-19 episode (years, median [IQR])	56.60 [43.37, 68.30]	44.20 [30.90, 54.73]	0,96 [0,93-1,00]
MEDICAL HISTORY			
Diabetes mellitus, n(%)	11 (14.4)	1 (7.1)	0,44 [0,02-2,58]
Chronic kidney disease, n(%)	15 (19,7)	2 (14.3)	0,65 [0,09-2,76]
Renal replacement therapy, n(%)	5 (6.5)	0	1,2 [NA-1,3]
Kidney transplantation, n(%)	9 (11,8)	0	1,1 [NA-1,3]
COVID EPISODE			
Patient fully vaccinated before COVID-19	11 (14.5)	3 (21.4)	1,6 [0,3-6,0]
Oxygen therapy > 6L.min-1, n(%)	30 (39,5)	1 (7.1)	0,1 [0,01-0,6]
Thrombosis, n (%)	6 (7,8)	0 (0.0)	1,1 [NA-1,4]
TREATMENTS RECEIVED FOR COVID-19			
High dose steroids, n(%)	22 (28,9)	5 (35.7)	1,3 [0,4-4,3]
Biotherapy, n(%)	6 (7,8)	0	1,3 [NA-1,4]
LUPUS CHARACTERISTICS			
Time since SLE diagnosis (years, median [IQR])	14.80 [6.80, 22.80]	6.40 [1.92, 17.53]	0,97 [0,91-1,02]
History of SLE renal flare, n (%)	38 (50,0)	6 (42.9)	0,7 [0,2-2,2]
Antiphopholipid biology, n(%)	15 (19,7)	4 (28.6)	1,5[0,4-5,4]
APLS , n(%)	9 (11,8)	2 (14.3)	1,2 [0,4-6,5]
Associated Sjögren syndrome, n(%)	13 (17.1)	4 (28.6)	1,8 [0,4-6,5]
SLE TREATMENT BEFORE COVID-19			
Steroids, n(%)	52 (68,4)	10 (71.4)	1,0 [0,3-4,0]
Hydroxychloroquine, n(%)	49 (64,4)	9 (64.3)	0,9 [0,3-3,1]
Mycophenolate mofetil, n(%)	23 (30,3)	2 (14.3)	0,4 [0,1-1,5]
Azathioprine, n(%)	5 (6.5)	1 (7.1)	1,1 [0,1-7,3]
Rituximab , n(%)	7 (9.2)	0	1,12 [NA-6,9]
Methotrexate_t0, n(%)	9 (11,8)	1 (7.1)	0,5 [0,03-3,4]

post COVID-19 SLE flare could be hypothesized. Our objectives were to assess this risk and to look for factors associated with a post-COVID-19 SLE flare.

Methods We conducted a retrospective cohort study using the Assistance Publique - Hôpitaux de Paris (AP-HP) Clinical Data Warehouse which collects all the medical data produced in the 39 AP-HP facilities in Paris area. We included every adult patient with a history of SLE (defined by a 'M32' ICD-10 diagnosis code) and an hospital stay with a first episode of COVID-19 diagnosis (defined by a 'U07.1' ICD-10 code) between March 2020 and February 2022. All the medical records were individually reviewed to retrieve demographics, SLE characteristics, COVID-19-episode characteristics, and vaccination status. We look for clinically defined SLE flares during the follow-up period. Features associated with post COVID-19 SLE flares were analysed by using univariable and multivariable logistic regression procedures.

Results Among the 4,533 SLE patients followed in AP-HP, 128 (2.8%) had an hospital stay with a COVID-19 diagnosis during the period of interest. After reviewing all the individual records, we excluded 38 patients who did not meet the inclusion criteria. Accordingly, there were 90 patients included in the analysis; 84 (93.3%) were female with a median [IQR] age of 54.6 [40.8–68.3] years. The median time between SLE diagnosis and the COVID-19 episode was 13.5 [5.6–22.8] years. Seventy-three (81.1%) patients did not receive any dose of anti-Sars-Cov2 vaccine before the COVID-19 episode and 9 (10%) died directly from COVID-19. We observed 14 (15.5%) post-COVID-19 SLE flares, 6 (42.9%) of them occurred in the same hospital stay. The median time between the beginning of the COVID-19 episode and the SLE flare was 60 [20.5–117.5] days. Six (42.9%) of these flares involved the kidneys with 3 (21.4%) class III or IV glomerulonephritis. We did not observe any significant difference in the characteristics of patient who experienced a flare compared to the others. Interestingly, there were no difference in the proportion of patients vaccinated between the two groups: 10/14 (76.9) in the flare group versus 62/74 (83.8%) in the group with no flare (p=0.83).

Conclusions Autoimmune flares seem to be frequent after COVID-19 infection among SLE population. We did not identify any risk factor associated with a risk of post-COVID-19 SLE flare.

Friday 07 October 2022 from 09:50 to 11:20

S06 nephritis

S06.1 B CELL KINETICS UPON THERAPY COMMENCEMENT FOR ACTIVE EXTRA-RENAL SYSTEMIC LUPUS ERYTHEMATOSUS IN RELATION TO DEVELOPMENT OF RENAL FLARES

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10.1136/lupus-2022-elm2022.13