(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 ($\rho$=0.47; P<0.001) and GCs ($\rho$=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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**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-$\alpha$ (IFN-$\alpha$) 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-$\alpha$ 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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**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