features, laboratory results of late-onset systemic lupus erythematosus in a tertiary rheumatology center in China.

Methods We retrospectively analyzed 198 patients with late-onset SLE admitted to RenJi Hospital, Shanghai Jiaotong University School of medicine from Jan, 2013-Jan, 2018. A control group of randomly selected 198 SLE patients with disease onset earlier than the age of 50 admitted to the same hospital at the same time period was recruited. Clinical and laboratory data were collected through chart review.

Results Between January 2018 and August 2018, 198 SLE patients fulfilled definition for late-onset SLE. The predominance of women among late-onset SLE (4.7 : 1) was decreased as compared with that observed in early-onset SLE (18.8 : 1). The following clinical manifestations were less common in late-onset SLE when compared to that observed in early-onset group: malar rash (33.8% vs 64.1%, p=0.000), alopecia (11.6% vs 28.2%, p<0.001), photosensitivity (6.06% vs 13.6%, p=0.011), nephropathy (proteinuria: 24.2% vs 58.5%; hematuria 2.02% vs 21.2%, p<0.001), neuropsychiatric symptoms (1.51% vs 7.57%., p=0.004), while a higher incidence of xerostomia existed in late-onset SLE (9.59% vs 20.2% p=0.003) (table 1). Complement levels (C3, C4, CH50) were significantly higher in late-onset group when compared to those in early-onset group. Immunoglobulin G and A levels were higher in late-onset group than those in early-onset group (table 2). A non-significant decrease of urine protein creatinine ratio was observed in the late-onset group. A significantly increased incidence of positive anti-U1RNP, anti-SSA Ro60, and anti-SSB La was observed among the late-onset SLE patients (table 3).

Conclusions Our study confirmed that in a Chinese population, late-onset SLE patients were different from early-onset SLE patients in terms of clinical manifestations and laboratory results.

Funding Source(s): N/A

170 COMPARING THE PERFORMANCE OF TWO INTERFERON-GAMMA RELEASE ASSAYS IN AUTOIMMUNE SKIN DISEASE PATIENTS: A PROSPECTIVE STUDY

[1]Rebecca L Krain*, [1]Rebecca G Gaffney, [1]Emily R Keyes, [1]Rui Feng, [2]Victoria P Werth. *[1]University of Pennsylvania, Department of Dermatology; [2]Perelman School of Medicine, University of Pennsylvania*

10.1136/lupus-2019-lsm.170

Background Autoimmune skin disease patients are standardly screened for tuberculosis via interferon-gamma release assays (IGRAs) prior to starting new immunosuppressive drugs or enrolling in clinical trials. Two commercial IGRAs, T-SPOT.TB and QuantiFERON-Tb Gold (QFT-G), are reported as either determinate (positive or negative) or indeterminate. Both tests utilize similar immunoenzymatic reactions for interferon-gamma detection, but differ in its quantification. Though the QFT-G is more widely used, studies have demonstrated that the T-SPOT.TB has lower rates of indeterminate results in immunosuppressed patients, and thus may prevent a delay in the initiation of necessary therapies or enrollment in clinical trials. The newest generation of QFT-G, the QuantiFERON-TB Gold Plus (QFT-Plus), has not been compared to the T-SPOT.TB in this patient population. We aim to investigate the performance of both the T-SPOT.TB and QFT-Plus, as indeterminate results represent a major barrier to receiving appropriate treatment in autoimmune skin disease patients.

Methods This ongoing prospective study included 48 patients seen at the Hospital of the University of Pennsylvania. Venous blood samples were collected from patients and underwent tuberculosis screening with QFT-Plus and T-SPOT.TB IGRAs. The proportions of indeterminate and determinate (positive and/or negative) results among the two tests were compared.

Results In the study population of 48 patients, 29% had a primary diagnosis of cutaneous lupus (n=14). There were 2 indeterminate results with the QFT-Plus and no indeterminate results with T-SPOT.TB. There was also one positive result that was seen with both the QFT-Plus and T-SPOT.TB. All patients with a primary diagnosis of cutaneous lupus had negative results for both QFT-Plus and T-SPOT.TB. Using a one-tailed Fischer test, there was no statistical significance when comparing QFT-Plus and T-SPOT.TB in autoimmune skin disease patients (p=0.25).

Conclusions In this prospective study, the T-SPOT.TB had fewer indeterminate results compared to the QFT-Plus. Though this finding was not statistically significant, it is clinically important as indeterminate results preclude autoimmune skin disease patients from receiving necessary treatment. Compared to previous studies on the older generation of the QFT-G test, the QFT-Plus showed improvement in reducing the amount of indeterminate results. Despite this, we suggest using the T-SPOT.TB in tuberculosis screening for autoimmune skin disease patients who have an indeterminant QFT-G or QFT-Plus, as this test did not display any indeterminate results. The results of this study are limited by the small sample size.

Funding Source(s): This project was supported by Oxford Immunotec, Inc.

171 CONCORDANCE OF DORIS REMISSION CRITERIA WITH THE TREATING PHYSICIANS (DORIS-)INDEPENDENT REMISSION JUDGMENT IN A SLE-COHORT AT A TERTIARY CENTER

Johanna Mucke*, Christina Duesing, Nora Kachabia, Gamal Chehab, Matthias Schneider. *Policlinic of Rheumatology and Hiller-Research Unit of Rheumatology, Heinrich-Heine-University Duesseldorf, Düsseldorf*

10.1136/lupus-2019-lsm.171

Background The definition of an accurate target for a treat to target (T2T) approach in SLE has been challenging over the past years. Recently four definitions of remission were presented by the international DORIS task force. Aim of this study was to evaluate the frequency of remission in our outpatient SLE cohort and to assess feasibility and concordance of the remission definitions with the treating physicians opinion regarding the patients state.

Methods In this monocentric cross-sectional study patients with SLE according to the 1997 American College of Rheumatology (ACR) criteria were enrolled and assessed between September 2016 and December 2017. DORIS remission definitions were applied and demographic and laboratory data as

well as disease activity (SLEDAI), steroid dosage and physician global assessment were evaluated. After the clinical consultation, the treating physicians answered the question if his/her patient was in remission.

Results A total of 233 patients were included (87.6% female). 88 (37.8%) patients fulfilled any of the four DORIS remission definitions, while 129 patients were in remission according to their physicians judgement. Of the 88 in DORIS remission, 17 were in complete remission, 20 in clinical remission, 16 in complete remission on treatment (ROT) and 35 in clinical ROT. In most cases the treating physician agreed on their patient being in remission (94.1% for complete remission, 90.0% for clinical remission, 81.3% for complete ROT, 88.6% for clinical ROT). A total of 145 patient were not in any DORIS remission. We observed discordance in the assessment of remission in 58 patients (24.9%), 10/88 being not in remission according to their treating physician despite fulfilling the DORIS remission definition and 48/145 were considered in remission though not in DORIS remission. Reasons for failing DORIS remission in the patients with attested physicians remission were an elevated cSLEDAI Score (n=22), elevated (n=24) or missing (n=1) physician global assessment, and prednisolone dosage >5 mg (n=9).

Conclusions DORIS remission proved an achievable target in our outpatient clinic. Still we found discordance regarding DORIS remission and the treating physicians judgement with a greater number of patients considered in remission by their physicians. Main reasons were a cSLEDAI >0 and physician global assessment >0.5. Further analyses are needed to better characterize cases of disagreement and to address the question, if the rather strict DORIS criteria are needed to improve long-term outcome.

Funding Source(s): None

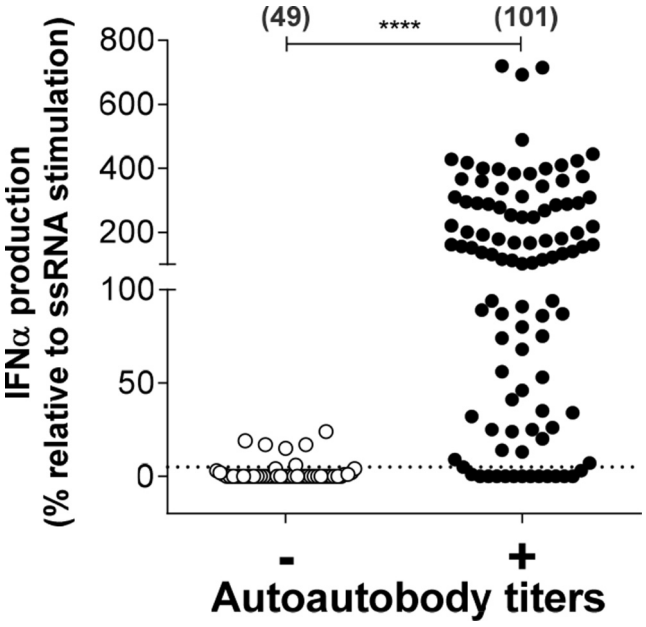
172 DIFFERENTIAL MARKERS AND IN VITRO FUNCTION OF SLE PATIENT SERA AUTOANTIBODIES IN A LARGE COHORT REVEALS SPECIFIC ACTIVATION OF NUCLEIC-ACID SENSING PATHWAYS

[1]Stuart R Hawtin*, [1]Cedric Andre, [1]Valerie Caballero, [1]Katriona McMichael, [1]Sabina Pfister, [2]Simone Appenzeller, [3]Allen Watts, [1]James Rush, [3]Hermine I Brunner. *[1]Novartis; [2]University of Campinas; [3]Cincinnati Children's Hospital Medical Center*

10.1136/lupus-2019-lsm.172

Background Identification of non-invasive differentially regulated markers in SLE are valuable to improve diagnosis, prediction of response to treatment(s) or classification of disease subpopulations. Our goal was to assess a broad range of serum protein markers in a large cohort of SLE patients and further characterize the role of autoantibodies in serum of these patients for their functional capacity as specific immune complexes to activate the IFN axis.

Methods In this multicenter study, we have characterised a large cohort of mostly pediatric SLE patients (n=150) with longitudinal sera samples (total n=269). Serum cytokines/chemokines levels and their extractable nuclear antigen antibody (ENA) and antinuclear antibody (ANA) profiles measured from SLE patients and healthy subjects using a 30-panel Multiplex and individual enzyme-linked immunosorbent assays. Patient sera containing autoantibodies and specific antigens activating the IFN pathway quantified on human primary cells using AlphaLisa technology. Statistics for significance Mann-Whitney (*p<0.05, **p<0.01, ***p<0.001, ****p<0.0001).



Abstract 172 Figure 1 SLE patient sera activate the type I IFN pathway as an immune-complex

Results Differentially regulated cytokines/chemokines were elevated in sera of SLE patients compared to healthy individuals. Notably, IFN-related proteins (IFNalpha*, IFNgamma* and IP10****), B-cell and monocytes chemokines including CXCL13**** and MCP-1***, as well as Th1/17 activating cytokines (IL-12****, IL-17**) and those involved in antibody production by B lymphocytes (IL-10**, IL-13**, IL-6*) being more significant. Collectively, these peripheral markers may serve to help inform diagnosis and support the choice treatment in the clinic. We established a miniaturized functional assay and show that the vast majority of SLE patient sera containing common ENAs (against RNP/Sm, SS-A) and ANAs (dsDNA) could specifically activate the type I IFN pathway as an immune-complex on healthy peripheral blood mononuclear cells (PBMCs) (figure 1). We demonstrate that SLE containing immune-complexes (with specific antigens) can trigger IFN release potentially via nucleic-acid RNA/DNA sensors. Clustering patient autoantibody ENAs profiles reveal that most of the SLE patients in this cohort display a stronger IFN functional activation profile.

Conclusions Given the high incidence of elevated IFN signatures in SLE patients, it is not surprising that increased IFN-related proteins and ENA/ANAs that trigger IFN responses are more evident in SLE patient serum. The prevalence of ENA/ANAs in patient sera that have the functional capacity to