arthritis (RA). Previous prospective studies have used a clinical definition of arthritis. Thus, we aimed to investigate risk factors of developing arthritis in ACPA-positive subjects with musculoskeletal complaints who did not have any of clinical and ultrasound signs of arthritis.

Methods Subjects with positive ACPA-test referred from primary care to rheumatology clinic, lacking arthritis in hands and feet by clinical and ultrasound examination (according to EULAR-OMERACT synovitis definition), were recruited into the Risk-RA research program. Patient included between years 2015–2016 with clinical data up to 2017 were analysed. Blood samples from inclusion were analysed for 13 specific ACPA reactivities using a custom made ImmunoCAP ISAC microarray. Presences of HLA-SE risk gene were analysed using DR low-resolution kit.

Results 41% (27 out of 66) of the Risk RA subjects developed arthritis during a median follow up of 8 months. The rest was followed 25 months in median without any signs of arthritis. Subjects developing arthritis tended to have a higher concentration of anti-CCP, more tender joints and rheumatoid factor positivity at inclusion compared to those not developing arthritis. The number of ACPA-reactivities (mean 6 vs 3), the presence of HLA-SE (89% vs 56%) and the occurrence of ultrasound detected tenosynovitis (44% vs 5%) at inclusion were significantly increased in subjects developing arthritis compared to those not developing arthritis.

Univariate cox proportional hazards regression showed a hazard ratio (HR) for arthritis development of 1.1 for every increase in number of ACPA reactivities (95% CI 0.99 to 1.2, p 0.07); HR: 4.4 (95% CI 2.0 to 9.5, p 0.0002) for tenosynovitis and for HR: 4.9 (95% CI 1.5 to 16, p 0.01) for HLA-SE carriers. All subjects with tenosynovitis ($n=14$) prior to arthritis development were carriers of HLA-SE, except for one subject but similar to the majority this HLA-SE no-carrier also progressed to arthritis.

Conclusions Subjects with ACPA-positive musculoskeletal complaints lacking any clinical and ultrasound signs of arthritis are at high risk of developing arthritis, especially carriers of HLA-SE with tenosynovitis. The role of inflammatory spreading from tendons (synovial sheath) to synovial tissue within joints need to be further investigated.

Disclosure of Interest None declared

P024 DISTURBED SEXUAL FUNCTIONING IN FEMALE PATIENTS WITH IDIOPATHIC INFLAMMATORY MYOPATHIES

¹B Hermankova*, ¹M Spiritovic, ²H Smucrova, ^{2,3}S Oreska, ^{2,3}H Storkanova, ^{2,3}K Pavelka, ^{2,3}L Senolt, ^{2,3}H Mann, ^{2,3}J Vencovsky, ^{2,3}M Tomcik. ¹Faculty of Physical Education and Sport, Charles University, Prague; ²Institute of Rheumatology, Prague 2; ³Department of Rheumatology, 1st Faculty of Medicine, Charles University, Prague, Czech Republic

10.1136/annrheumdis-2018-EWRR2019.18

Career situation of first and presenting author Student for a master or a PhD.

Introduction Idiopathic inflammatory myopathies (IIM) are characterized by inflammation and atrophy of skeletal muscles, pulmonary and articular involvement, which leads to functional impairment, reduced quality of life including sexual life.

Objectives The aim of this study was to assess sexual functions/quality of life and pelvic floor function in female IIM patients compared to age-/sex-matched healthy controls (HC).

Methods In total, 22 women with IIM [mean age: 55.1, disease duration: 7.9 years, dermatomyositis (DM, 8)/polymyositis

(PM, 10)/necrotizing myopathy (IMNM, 3)/inclusion body myositis (IBM, 1)], who fulfilled the Bohan/Peter 1975 criteria for DM/PM, and 22 healthy controls (mean age: 55.1 years) filled in 12 well-established and validated questionnaires assessing sexual function and pelvic floor function, fatigue, physical activity and depression. We used the following questionnaires: Female Sexual Function Index (FSFI), Brief Index of Sexual Function for Women (BISF-W), Sexual Quality of Life Questionnaire (SQoL-F), Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12), Pelvic Floor Distress Inventory Questionnaire (PFIQ7), Fatigue Impact Scale (FIS), Beck's Depression Inventory II (BDI II), Health Assessment Questionnaire (HAQ) and Human Activity Profile (HAP).

Results Compared to HC, patients with IIM had significantly higher prevalence and greater severity of sexual dysfunction (FSFI, BISF-W: in all subscales as well as total scores), dysfunction of pelvic floor (PISQ-12), and worse sexual quality of life (SQoL-F). Worse scores in IIM patients were associated with elevated muscle enzyme levels [lactate dehydrogenase: FSFI ($r=-0.524$, $p=0.0123$), BISFW ($r=-0.528$, $p=0.0115$)], greater fatigue [FIS: FSFI ($r=-0.434$, $p=0.0438$), BISF-W ($r=-0.488$, $p=0.0211$), SQoL-F ($r=-0.488$, $p=0.0070$), PISQ-12 ($r=0.643$, $p=0.0013$)], more severe depression [BDI-II: PISQ-12 ($r=0.474$, $p=0.0258$)], deteriorated quality of life [HAQ: PISQ-12 ($r=0.476$, $p=0.0252$)], and worse ability to perform physical activities [HAP: FSFI ($r=0.437$, $p=0.0417$), BISF-W ($r=0.451$, $p=0.0351$), PISQ-12 ($r=-0.494$, $p=0.0195$)].

Conclusions Women with IIM reported significantly disturbed sexual function, sexual quality of life and pelvic floor function than age-matched healthy controls. Worse scores in IIM were associated with disease activity, physical activity, fatigue, depression and quality of life.

Acknowledgements Supported by AZV-16-33574A, MHCR 023728, and SVV – 2 60 373.

Disclosure of Interest None declared.

P025 DISTURBED SEXUAL FUNCTIONING IN FEMALE PATIENTS WITH SYSTEMIC SCLEROSIS

¹B Hermankova*, ¹M Spiritovic, ²H Smucrova, ^{2,3}S Oreska, ^{2,3}H Storkanova, ^{2,3}K Pavelka, ^{2,3}J Vencovsky, ^{2,3}L Senolt, ^{2,3}R Becvar, ^{2,3}M Tomcik. ¹Faculty of Physical Education and Sport, Charles University, Prague; ²Institute of Rheumatology, Prague 2; ³Department of Rheumatology, 1st Faculty of Medicine, Charles University, Prague, Czech Republic

10.1136/annrheumdis-2018-EWRR2019.19

Career situation of first and presenting author Student for a master or a PhD.

Introduction Systemic sclerosis (SSc) is a chronic autoimmune disease leading to various physical and psychological impairments including sexual dysfunction.

Objectives The aim of this study was to assess sexual functions/quality of life and pelvic floor function in female SSc patients compared to age-/sex-matched healthy controls (HC), and to analyze the potential impact of disease activity, fatigue, physical activity and depression.

Methods In total, 41 women with SSc (mean age: 50.9, disease duration: 5.8 years, lcSSc/dcSSc: 18/23, mRSS: 13.6, ESSG activity index: 2.5), who fulfilled the ACR/EULAR 2013 criteria, and 41 healthy controls (mean age: 50.9) without rheumatic diseases filled in 12 well-established and validated questionnaires assessing sexual function/quality of life, pelvic floor function, fatigue, physical activity and depression. We

used the following questionnaires: Female Sexual Function Index (FSFI), Brief Index of Sexual Function for Women (BISF-W), Sexual Quality of Life Questionnaire (SQoL-F), Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12), Pelvic Floor Distress Inventory Questionnaire (PFIQ7), Fatigue Impact Scale (FIS), Beck's Depression Inventory II (BDI II), Health Assessment Questionnaire (HAQ), Scleroderma Health Assessment Questionnaire (SHAQ) and Human Activity Profile (HAP).

Results Compared to HC, patients with SSc had significantly higher prevalence and greater severity of sexual dysfunction (FSFI, BISF-W: in all subscales as well as total scores), dysfunction of pelvic floor (PISQ-12, PFIQ7), and worse sexual quality of life (SQoL-F) (table). Worse scores in SSc patients were associated with higher disease activity [ESSG activity index: SQoL-F ($r=-0.364$, $p=0.0443$)], greater fatigue [FIS correlated negatively with both FSFI, and BISF-W], more severe depression [BDI-II: FSFI ($r=-0.553$, $p=0.0002$), BISF-W ($r=-0.514$, $p=0.0007$)], deteriorated quality of life [SHAQ: FSFI ($r=-0.536$, $p=0.0003$), BISF-W ($r=-0.563$, $p=0.0001$), SQoL-F ($r=-0.338$, $p=0.0382$), PISQ-12 ($r=0.563$, $p=0.0051$)], and worse ability to perform physical activities [HAP: FSFI ($r=0.407$, $p=0.0082$), BISF-W ($r=0.409$, $p=0.0078$)].

Conclusions Women with SSc reported significantly impaired sexual function, sexual quality of life and pelvic floor function than age-matched healthy controls. Worse scores in SSc were associated with disease activity, physical activity, fatigue, depression and quality of life.

Acknowledgements Supported by AZV-16-33574A, MHCR 023728, and SVV – 2 60 373.

Disclosure of Interest None declared.

P026

CONTROL OF α 2,6-SIALYLATION IN B-CELLS, AND CONSEQUENCES OF REDUCED B-CELL SIALYLATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

¹L Johnston*, ¹L Ouboussad, ^{1,2}A Aslam, ^{1,2}MH Buch. ¹Limm, University of Leeds; ²NIHR Leeds Biomedical Research Centre, Leeds Teaching Hospitals Trust, Leeds, UK

10.1136/annrheumdis-2018-EWRR2019.20

Career situation of first and presenting author Student for a master or a PhD.

Introduction Sialic acids are a family of 9-carbon sugars, added to the termini of glycoprotein chains, which are present on the surface of many cells, and secreted proteins.¹ Sialic acids on glycan chains of the Fc fragment of IgG molecules can affect how IgG binds Fc receptors.² In RA and other autoimmune conditions, disease specific auto-antibodies display decreased Fc sialylation compared with normal IgG.³ It has also been shown that plasmablasts from patients with RA display reduced cell surface sialylation compared to healthy control cells.⁴ Factors which determine B-cell surface sialylation, including regulation of ST6Gal1 and NEU1 which add and cleave sialic acid from glycoprotein chains respectively, and consequences of altered sialylation have not been well described.

Objectives The aim of this study was to investigate factors which influence α 2,6-sialylation in B-cells from the peripheral blood of healthy controls and patients with RA, and to investigate regulation of expression of ST6Gal1 and NEU1 in B-cells.

Methods B-cells isolated from the peripheral blood of healthy volunteers were cultured for 48 hours in the presence of TLR

ligands, anti-IgM, CD40L, cytokines (TNF, IL-4, IL-6, IL-17) before α 2,6-sialylation of the B-cell surface, and mRNA expression of genes related to α 2,6-sialylation were measured by SNA lectin flow cytometry, and qPCR respectively. PBMCs were also isolated from peripheral blood and T and B-cells activated using CD3/28 beads and anti-IgM/CD40L respectively, before measuring B-cell sialylation and expression of ST6Gal1 and NEU1 mRNA.

Results Surface α 2,6 sialylation was found to be increased in B-cells stimulated with TLR ligands or anti-IgM/CD40L. This was accompanied by a decrease in expression of both ST6Gal1 and NEU1 mRNA over 48 hours. Surface sialylation was also increased by activated T-cells in co-culture experiments, however sialylation was reduced in B-cell cultures in the presence of TNF.

Conclusions α 2,6-sialic acid is upregulated on the surface of healthy control B-cells in response to activation *in vitro*, and may be downregulated by TNF. Further experiments will determine if the environment in which naïve/memory B-cells are activated determines plasmablast/plasma cell sialylation, and if B-cells from patients with RA undergo the same changes in response to stimuli.

REFERENCES

1. Traving C, Schauer R. *Cell Mol Life Sci* 1998;54:1330–1349.
2. Sondermann P, et al. *PNAS* 2013; **110**:9868–9872.
3. Dekkers G, et al. *Front Immunol* 2018;**9**:553.
4. Pfeifle R, et al. *Nat Immunol* 2017;**18**(1):104–113.

Disclosure of Interest None declared.

P027

SRC-LIKE ADAPTOR PROTEIN EXPRESSION IN RHEUMATOID ARTHRITIS

¹P Királyhidi*, ¹ES Molnár, ¹EJ Baricza, ^{1,2}N Marton, ¹E Buzás, ¹G Nagy. ¹Department of Genetics, Cell- and Immunobiology, Semmelweis University; ²Jahn Ferenc South-Pest Hospital, Budapest, Hungary

10.1136/annrheumdis-2018-EWRR2019.21

Career situation of first and presenting author Student for a master or a PhD.

Introduction The Src-like adaptor protein (SLAP) plays a central role in the fine regulation of both B- and T-lymphocyte activation. According to our previous data SLAP is responsible for the proteasomal degradation of the CD3 zeta chain (CD3 ζ) of T-lymphocytes.¹

Objectives We studied the effect of IL-10, IL-17A and TNF- α treatment on the SLAP expression of CD4⁺ T- and CD19⁺ B-lymphocytes.

Methods Peripheral mononuclear cells (PMBC) were isolated from healthy donors and rheumatoid arthritis (RA) patients. CD4⁺ T-cells or CD19⁺ B-cells were isolated by negative magnetic separation; stimulated with ConA and goat anti-human IgG + IgM F(ab')₂ fragments respectively. The samples were treated with IL-17A (20 ng/ml and 80 ng/ml, 24 hour), IL-10 (100 U/ml, 48 hour and 72 hour) and TNF- α (20 ng/ml and 60 ng/ml, 24 hour). The SLAP and CD3 ζ expression were measured by Western blot.

Results Both the SLAP and the CD3 ζ expression of the MTX treated patients' CD4 cells were higher upon IL-17A and IL-10 treatment, than those of the MTX non-treated RA patients' or healthy donors'. The TNF- α induced SLAP expression of RA patients' CD19 B-cells was higher than those of the healthy donors' B cells ($p=0.05$).