the inherent mechanism of Nec-1 inhibit neutrophil release NETs is related to it specifically promotes neutrophil apoptosis.

REFERENCES

1. Porto BN, et al. Neutrophil Extracellular Traps in Pulmonary Diseases: Too Much of a Good Thing? *Frontiers Immunology* 2016;**7**:311.
2. Toussaint M, et al. Host DNA released by NETosis promotes rhinovirus-induced type-2 allergic asthma exacerbation. *Nature Medicine*, 2017;**23**(6):681–691.
3. Pham, DL, et al. Neutrophil autophagy and extracellular DNA traps contribute to airway inflammation in severe asthma. *Clin Exp Allergy*, 2017;**47**(1):57–70.

Acknowledgements Thanks to the colleagues in the team of Dr Erwei Sun.

Disclosure of Interest None declared.

P047

THE PLASMA CELL BONE MARROW NICHE IN ACPA+ RA PATIENTS CONTAIN CITRULLINE SPECIFIC CELLS

R Thyagarajan*, AH Hensvold, L Israelsson, J Steen, H Wähämaa, A van Vollenhoven, K Amara, Al Catrina, V Malmström, C Grönwall. *Department of Medicine, Division of Rheumatology, Center for Molecular Medicine, Karolinska Institutet, Karolinska University Hospital, Stockholm, Sweden*

10.1136/annrheumdis-2018-EWRR2019.39

Career situation of first and presenting author Post-doctoral fellow

Introduction Anti-citrullinated antibodies (ACPA) in RA have been postulated to contribute to disease pathogenesis. This has been supported by studies of monoclonal APCA generated by cloning from single cell sorting of different B cell subsets from peripheral blood and synovial fluid. It has been debated if the bone marrow (BM) compartment of RA patients hosts long lived plasma cells producing ACPA or if ACPA are primarily coming from plasmablasts at the sites of inflammation, e.g. the synovium.

Objectives The main objectives were to study primary lymphoid tissue from RA patients, the BM plasma cell IgG repertoire and further characterize recombinantly expressed antibodies from selected sequences to explore if ACPA producing long lived plasma cells reside in this niche.

Methods For this study we collected bone marrow from proximal or distal femur of RA patients undergoing hip replacement surgery due to secondary osteoarthritis. BM samples were processed from four ACPA+RF+ and one ACPA-RF+ RA patients. Mononuclear cells were obtained by Ficoll separation and CD138+ plasma cells were single cell sorted by flow cytometry. Paired heavy and light chains were PCR amplified, sequenced and analyzed by V-Quest and IgBLAST towards the IMGT database to annotate variable gene usage. Selected sequences were cloned and expressed as IgG in Expi293 cells.

Results Overall 465 paired IgG BM plasma cell sequences were obtained, 97 from the ACPA- patient and 368 (range 20–194) from ACPA+ patients. We observed statistically significant changes in heavy chain variable gene usage with lower VH-1 and higher VH-3 frequency in the ACPA+ sequences compared to ACPA- sequences. We also found statistically significant increase in VH N-glycosylation in ACPA+ sequences (22.6% ACPA+ vs 12.4% ACPA-; $p=0.03$). There was however no difference in mutation numbers. From these, 34 clones were selected, based on mutation numbers and presence of Fab N-glycosylation sites, for subsequent mAb-expression. Among the 34 clones we found two CCP2+ and cit-peptide

positive clones and one malondialdehyde-acetaldehyde (MAA) adduct reactive clone, originating from different APCA+ patients.

Conclusions We could identify BM plasma cells producing autoantibodies to malondialdehyde-modified proteins and citrullinated peptides, isolated from RA patients. Hence, we show for the first time, that not just at the site of inflammation but also long-lived plasma cells in bone marrow do produce RA specific autoantibodies.

Acknowledgements Orthopedic staff at Karolinska University Hospital. Danika Shepis, Louise Berg and Christina Gerstner for sorting help.

Disclosure of Interest None declared

P048

PREDICTIVE VALUE OF THE DIFFERENT CAPILLAROSCOPIC PATTERNS IN EARLY RAYNAUD PHENOMENON

¹J Uceda*, ¹R Hernandez, ²JL Marengo. ¹Rheumatology Unit, University Valme Hospital; ²Rheumatology Unit, Valme University Hospital, Seville, Spain

10.1136/annrheumdis-2018-EWRR2019.40

Career situation of first and presenting author Assistant.

Introduction The Raynaud phenomenon (RP) affects 3%–5% of the population. Most RPs are primary. The risk of the onset of autoimmune disease associated with RP (ADRP) is around 12%, and the diagnosis is usually made within 2 years of its onset. Capillaroscopy is a innocuous and inexpensive technique that is very useful in the study of RP.

Objectives The primary goal was to evaluate the capillaroscopic findings and their different patterns in patients with RF as the only symptom and establish their relationship between the subsequent development of ADRF. We have evaluated the relationship between the presence of the antinuclear antibodies (ANA) and the association with ADRF.

Methods We conducted an observational, descriptive, cross-sectional study of 98 patients with RP as the main manifestation. Periungual capillaroscopy was performed from the 3rd to the 5th finger of both hands. Sociodemographic variables, and results of ANA were described. To assess the validity of capillaroscopy as a diagnostic test, we determined the sensitivity, specificity, and positive and negative predictive value (PPV, NPV).

Results 73.5% were women. The median time of evolution of the RP was 2.5 years. 76% were ANA negative.

The evaluation of the predictive capacity of capillaroscopy for the development of EARP yields the following Results.

sensitivity: 83,3% (62,6–95,2), specificity: 78% (66,8–86,9), PPV 34,1% (24,5–45,3), PNV 97,1% (93,3–98,8).

The capillaroscopic findings were: 62% no alterations, 21.4% no specific capillaroscopy changes, 14.3% 'scleroderma' type capillaroscopic pattern, and 2% characteristic pattern of mixed connective tissue disease (MCDT). None of the patients who did not present alterations developed autoimmune disease. Of the 21 patients who presented nonspecific changes, 5 developed limited systemic sclerosis (SSc), 3 MCTD, and 1 diffuse SSc. Of the 14 patients who presented 'scleroderma' type capillaroscopic pattern, 5 develop limited SSc, 3 diffuse SSc, 2 MCTD and 1 did not present autoimmune disease. Of the two patients with characteristic alterations of MCDT, 1 developed this disease. When analyzing the relationship between the presence of ANA and the association