patients showed a higher ACPA reactivity as BAL fluids both IgA and IgG. IgG from BAL fluids of ACPA positive RA. A majority of serum ACPA positive RA patients containing citrullinated residues. Two vimentin derived citrullinated peptides were present in a majority of both synovial and lung biopsies with slightly higher citrullinated/unmodified peptides ratios in the smokers as compared to non-smokers.

Conclusions Lung subclinical inflammation is present already at the earliest visit to a rheumatology specialist early after disease onset in ACPA + RA patients. These findings suggest that the lungs might be the primary local initiation sites of the anti-citrulline response in RA.

A1.4 EARLY SIGNS OF SUBCLINICAL INFLAMMATION AND LOCAL ANTIBODY PRODUCTION IN EARLY RHEUMATOID LUNGS

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Objective To investigate if lung changes are present in RA patients early in the disease process and to address the contribution of these changes to disease initiation.

Patients and Methods 21 RA patients with symptom duration less than 1 year at the time of diagnosis and naive to DMARD treatment and 8 healthy individuals were subjected to bronchoscopy and mucosal large bronchial biopsies were retrieved. Histological analysis for identification of inducible bronchial associated lymphoid tissues (iBALT), PAD enzymes, CD3, HLA-DQ and HLA-DR expression were performed. Presence of citrullinated targets were detected by immunohistochemistry using biotinylated ACPA isolated from synovial fluid of RA patients. Presence of ACPA and ACPA fine specificities were tested by ELISA in the serum and BAL of RA patients. Mass spectrometry was used for identification of citrullinated epitopes in 6 of the lung biopsies and additional 8 synovial RA biopsies.

Results iBALT formation and higher expression of CD3, HLA-DQ, HLA-DR and citrullinated targets was observed in bronchial biopsies of ACPA positive RA. A majority of serum ACPA positive RA patients subjected to lung bronchoscopy had detectable levels of ACPA in the BAL fluids both IgA and IgG. IgG from BAL fluids of ACPA-positive patients showed a higher ACPA reactivity as compared to serum IgG from the same patients. Mass spectrometry identified 5 proteins in the synovium (in total 8 sites) and 4 in the lungs (in total 6 sites) containing citrullinated residues. Two vimentin derived citrullinated peptides were present in a majority of both synovial and lung biopsies with slightly higher citrullinated/unmodified peptides ratios in the smokers as compared to non-smokers.

Conclusions Lung subclinical inflammation is present already at the earliest visit to a rheumatology specialist early after disease onset in ACPA + RA patients. These findings suggest that the lungs might be the primary local initiation sites of the anti-citrulline response in RA.