PRESENCE OF FOUR SERUM AUTOANTIBODIES ASSOCIATES WITH THE ACPA STATUS IN EARLY RHEUMATOID ARTHRITIS

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Background: The presence of anti-citrullinated protein antibodies (ACPA) is a hallmark of rheumatoid arthritis (RA) that precede the development of the disease by years and is used for its clinical diagnosis. However, there are RA subtypes that test negative for ACPA and thus the early diagnosis on these patients may be delayed. Furthermore, the presence or absence of ACPA in RA supports the hypothesis that on these two subsets of patients underlie different pathogenesis and clinical outcomes.

Objectives: In this work, we searched for serum autoantibodies useful to assist the early diagnosis of ACPA-seronegative RA and its management.

Methods: We profiled the serum autoantibody repertoire of 80 ACPA-seronegative and 80 ACPA-seropositive RA subjects from the Swedish population-based Epidemiological Investigation of Rheumatoid Arthritis (EIRA) cohort. A suspension bead array format built on protein fragments within Human Protein Atlas and selected from an initial untargeted screening using arrays containing 3660 total antigens was employed to identify IgG and IgA serum autoantibodies. A validation phase of these preliminary findings was conducted on a validated antibody library.

Results: Preliminary flow cytometry data shows that the cell size and autofluorescence of ACPA-seronegative RA subjects was significantly increased compared with healthy controls. These preliminary findings suggest senescence already in early RA and provide a rationale for investigating the consequence of senescence on immune cell responses.

Disclosure of Interests: None declared.

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