A11 DISTINCT ACPA FINE-SPECIFICITIES, FORMED UNDER THE INFLUENCE OF HLA SHARED EPITOPE ALLELES, HAVE NO EFFECT ON RADIOGRAPHIC JOINT DAMAGE IN RHEUMATOID ARTHRITIS

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Objectives HLA shared epitope (SE) alleles are associated with joint destruction, the presence of anticitrullinated protein antibodies (ACPA) and are known to shape the ACPA fine-specificity repertoire in rheumatoid arthritis (RA). A large variation in the extent of joint destruction is seen within the ACPA-positive patient population, and it is conceivable that certain ACPA reactivities contribute most to radiological damage. Here, we investigated whether ACPA fine-specificities which are formed under the influence of SE-alleles associate with the extent of radiographic joint damage.

Methods Antibodies recognising six citrullinated epitopes were determined by ELISA in sera of 330 ACPA-positive RA patients genotyped for SE-alleles. The association between SE-alleles, ACPA fine-specificity and radiographic joint damage was assessed using long-term radiographic follow-up data. A second cohort of 154 RA patients with 5- and 10-year radiographic follow-up was used for replication.

Results SE alleles predisposed to the recognition of certain citrullinated epitopes. However, none of the ACPA fine-specificities studied influenced the extent of radiographic joint damage. Most relevant, although SE-alleles associated with radiographic damage in the total RA population, this association was no longer detectable after stratification for the presence of ACPA.

Conclusions SE-alleles are instrumental in shaping the ACPA repertoire. However, ACPA fine-specificities formed under the influence of SE-alleles do not seem to affect joint destruction.