(RA).¹ Anti-CarP autoAbs target proteins that are modified through an irreversible post-translational modification named carbamylation.

Objectives The aim of this work was to assess whether anti-CarP antibodies can be used as a predictive factor of clinical response to abatacept.

Methods Peripheral blood samples of selected patients were collected at the beginning of the therapy with abatacept (T0) and every six months for one year (T6 and T12). A home-made ELISA was applied to determine serum anti-CarP levels. Commercial anti-citrullinated protein antibodies (anti-CCP3) (Inova Diagnostic), Rheumatoid Factor (RF) (Siemens) and high sensitivity C reactive protein (hsCRP) were also tested.

Results Sixty RA patients (49 female (81.2%)), all caucasian, treated with abatacept were enrolled. Fifty-three (88.3%) and fifty-six (93.3%) patients were also treated with corticosteroids and synthetic DMARD respectively. At baseline anti-CarP antibodies were found in 18 (30%) patients; RF and anti-CCP were positive in 35 (58%) and 51 (85%) patients respectively. Comparing anti-CarP+ with anti-CarP- patients at T0, anti-CarP+ group resulted younger ($p<0.01$) and with a longer disease duration ($p<0.05$); hsCRP was higher in anti-CarP+ group ($p<0.05$). Considering the entire cohort, a significant reduction of anti-CarP titre at T6 and T12 of treatment was shown ($p<0.0001$) while anti-CCP and RF titre did not show any significant change. Thirteen out of 18 patients anti-CarP+ were available for analysis at T6 and in 6 cases turned anti-CarP-. A significant reduction of DAS28-CRP at T6 was found in the subgroup of anti-CarP+ pts in comparison with the negative ones ($p=0.03$). No significant results were found dividing the cohort using the positivity to anti-CCP and/or RF. Furthermore, stratifying groups of patients for the combination of biomarkers, any groups including anti-CarP+ resulted in a trend towards a higher DAS28 reduction compared with the combination of anti-CCP+ and RF+ and anti-CAP- ones.

Conclusions The precocious onset and a longer disease duration in anti-CarP positive patients might suggest them as a specific risk factors for RA in this subgroup of patients. The link between the anti-CarP positivity at baseline and the higher reduction of disease activity during the first six months of treatment permitted us to hypothesize that anti-CarP antibodies, but not anti-CCP and/or RF, could be a predictive factor of a good clinical response to abatacept.

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Disclosure of Interest None declared.

P019 IS TREATMENT RESPONSE INFLUENCED BY BODY MASS INDEX IN JUVENILE IDIOPATHIC ARTHRITIS?

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Introduction There is evidence that obesity could be a risk factor for the severity and response to treatment in patients with RA due both to the mechanical effect of overweight and

to the potential pro-inflammatory effects of cytokines produced by adipose tissue.

Objectives To evaluate the role of overweight and obesity in a cohort of patients with Juvenile Idiopathic Arthritis (JIA), in terms of incidence, disease activity, outcome and response to treatments.

Methods This single-center retrospective cohort study evaluated 110 children affected by JIA under treatment with anti-rheumatic agents (DMARDs, biologic agents). Changes from baseline in ESR, CRP, number of active joints, and BMI were analyzed under each treatment until last visit. BMI categories of 5–84th (normal weight), 85–94th (overweight), and ≥ 95 th (obese) percentile were used. Patients with systemic JIA, uveitis, chronic comorbidities, or under other potentially confounding systemic treatments were excluded. Uni- and multivariate analyses were performed.

Results One hundred and ten JIA patients (polyarticular $n=50$, oligoarticular $n=38$, psoriatic $n=12$, enthesitis related arthritis $n=8$, undifferentiated $n=2$) were enrolled in the study, 75% girls, 25% boys. The mean age at treatment onset was 6.09 years. Baseline BMI was ≤ 84 th percentile in 80 patients, 85–94th in 27, and ≥ 95 th in 3.

We did not observe a significant association between BMI and ESR, CRP, or number of active joints at baseline, while involvement of the joints of lower limbs was significantly greater ($p=0.025$) in overweight/obese patients. We observed a trend toward lower remission rates and higher number of relapses, both after DMARDs and biologics, in patients with higher BMI.

Conclusions This study focuses on the relationship between overweight/obesity and JIA. A significant correlation between obesity and a greater involvement of the joints of the lower limbs was observed at baseline. Furthermore our data suggest that obesity could negatively influence the course of the disease as well as treatment response.

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P021 DIFFERENTIAL ACPA BINDING TO NUCLEAR ANTIGENS REVEALS A DISTINCT SUBSET OF ACETYLATION CROSS-REACTIVE AUTOANTIBODIES IN RHEUMATOID ARTHRITIS

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