Results: Compared to the Vehicle, all treatments significantly reduced ($p<0.001$) arthritic score with a reduction of the arthritic score evaluated between 40% (for methotrexate) and 70% (for diclofenac) (figure 1. Compared to the vehicle, the radiographic score was improved by Naproxene, Diclofenac, Celecoxib, Glucocorticoids, Etanercept ($p<0.001$) but not by methotrexate. Compared to Etanercept, Naproxene and diclofenac showed less radiological structural changes ($p<0.01$) (figure 2).
Conclusions: Our study demonstrates for the first time that an early treatment with NSAIDs, excluding COX2 selective inhibitor, is more beneficial than Etanercept on the radiological damages in adjuvant induced arthritis. The close efficacy of all drugs on the arthritis score suggests that the beneficial impact of NSAID is not only driven by their impact on the systemic inflammation. NSAIDs should be used during the window of opportunity.
Disclosure of Interest: None declared
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FRI0045 ORAL MICROBIOME PROFILE IN RHEUMATOID ARTHRITIS PATIENTS: ASSOCIATION BETWEEN TONGUE BIOFILM PORPHYROMONAS GINGIVALIS AMOUNT AND DISEASE ACTIVITY

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Background: *P. gingivalis* is a Gram-negative anaerobic bacterium usually located in the oral cavity, as component of microbiome. Next to the established association with oral cavity diseases, such as periodontitis and halitosis, in the last years a growing interest has been addressed to its implication in the development of autoimmune diseases, such as Rheumatoid Arthritis (RA). The ability of *P. gingivalis* to citrullinate peptides is the most relevant link with RA. Indeed, this bacterium has several virulence factors directly contributing to its chronic inflammation regardless of citrullination. Data from the literature demonstrated the ability of *P. gingivalis* in inducing the production of several inflammatory cytokines, such as TNF, IL6 and IL17, through the TLR signaling pathways.
Objectives: In the present case-control study, we aimed at analysing tongue microbiome in a large RA cohort, focusing on the evaluation of *P. gingivalis* presence and quantification.
Methods: We enrolled 143 RA patients (1987 ACR criteria; M/F 32/111, mean±SD age 57.5±19.8 years, mean±SD disease duration 155.9±114.7 months); 36 periodontitis (M/F 11/25, mean±SD age 56±9.9 years, mean±SD disease duration 25.5±20.9 months); 57 (M/F 12/45, mean ±SD age 61.4±10.9 years, mean ±SD disease duration 62.3±66.9 months) affected by knee osteoarthritis or fibromyalgia (control subjects – CS). All subjects underwent a clinical evaluation in order to assess disease activity by DAS28. Blood serum samples were obtained to evaluate the presence of ACPA by a commercial ELISA kit. Finally, a standard cytologic swab to collect tongue biofilm samples was performed and the presence of *P. gingivalis* was evaluated by PCR method.
Results: The prevalence of *P. gingivalis* resulted significantly higher in RA and PD patients in comparison with CS (P=0.01 and P=0.003, respectively). No correlation between bacterium presence and ACPA was found. When evaluating the percentage of *P. gingivalis* on the total tongue biofilm, we observed a significant correlation between this measure and DAS28 values (r=0.4, P=0.01). Furthermore, RA patients in DAS28 remission showed a significantly lower prevalence of *P. gingivalis* in comparison with non-remission patients (P=0.02).
Conclusions: In the present study, for the first time we assessed the prevalence of *P. gingivalis*, i.e. its percentage on the total tongue biofilm, in a large RA cohort. A significant correlation between the amount of *P. gingivalis* on total tongue biofilm and disease activity was observed. There was no association with ACPA, suggesting that this bacterium, beyond citrullination, could be implicated in triggering a pro-inflammatory state in RA.
Disclosure of Interest: None declared
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FRI0046 IDENTIFICATION OF HERV-K ENV SURFACE PEPTIDES HIGHLY RECOGNIZED IN RA PATIENTS

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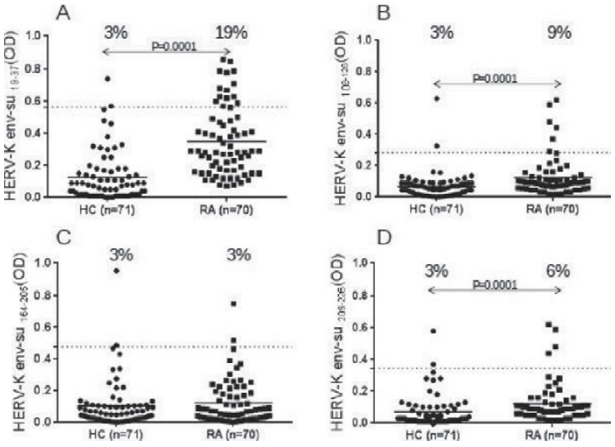
Background: Endogenous Retroviruses (HERV) are believed to be pathogenic in several autoimmune diseases. Among them, HERV-K viruses have been recently reported to be involved in the pathogenesis of rheumatoid arthritis (RA).
Objectives: In this study we have explored the role of humoral immune response against HERV-K as a potential pathogenetic mechanism in RA.
Methods: Four different peptides from the extracellular portion of the *env* protein of HERV-K (env-su $_{19–37}$, env-su $_{109–26}$, env-su $_{164–205}$, env-su $_{209–226}$) were selected by bioinformatic analysis on the basis of their putative immunogenicity. Indirect ELISA was then carried out to quantify antibodies against those peptides on blood samples from RA patients and healthy controls (HC). Differences between the two groups were analysed using the Mann-Whitney rank-sum and chi-square tests. Potential correlations between RA laboratory, clinical descriptors and IgGs levels were explored by bivariate regression analysis.
Results: Seventy consecutive RA patients and seventy-one HC crossed by age and sex were enrolled in the study. Serum autoantibodies against three out of the four tested peptides, anti HERV-Ksu$_{19–37}$, HERV-K env-su$_{109–126}$ and HERV-K env-su$_{205–226}$, were significantly more prevalent in RA than in HC (19% vs 3%,p=0.0001;9% vs 3%, p=0.0001; and 6% vs 3%, p=0.0001 respectively) (See Fig. 1)
Subgroup analysis showed no association between anti-HERV-K peptide humoral response and clinical, serological and clinimetric RA disease descriptors.



Conclusions: Serum from RA patients in our series significantly reacted against different HERV-K peptides in comparison to the general population suggesting a role for the HERV-K related, secondary antigenic driven immune response in the pathogenesis of RA. Further studies are needed to confirm these results and to explore the role of HERV-K surface peptides as potential therapeutic targets.
Disclosure of Interest: None declared
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FRI0047 ELEVATED 14-3-3ETA LEVELS PREDICT WORSE RADIOGRAPHIC OUTCOMES IN PATIENTS WITH RECENT-ONSET INFLAMMATORY ARTHRITIS IN CLINICAL REMISSION

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Background: 14–3-3η is a joint-derived serum protein that up-regulates pro-inflammatory factors. We have previously reported that baseline 14–3-3η levels ≥0.50 ng/ml (HIGH 14–3-3η) were predictive of radiographic progression over 5 years.
Objectives: Our objective was to verify if the persistence of HIGH 14–3-3η at 18 months in recent-onset polyarthritis patients in REMISSION predicts more rapid radiographic progression over the following years, up to 42 months.
Methods: Serum 14–3-3η titres were assessed at baseline and at 18 months into disease, a median of 14 months after diagnosis and initiation of treatment. Three definitions of "clinical remission" at 18 months were used: Swollen Joint Count (SJC) =0; SJC + Tender Joint Count (TJC) =0; ACR/EULAR Boolean definition. The progression of radiographic damage (Erosion and Total Sharp/van der Heijde (SvH) scores) in patients with LOW (<0.50 ng/ml) or HIGH (≥0.50 ng/ml) 14–3-3η were compared using the Mann-Whitney test. P values <0.05 were considered significant.
Results: Out of 331 patients, 36.0% of which had HIGH 14–3-3η at Baseline, 308 had complete data up to 5 years. Median age was 60 years, 62% women. Depending on the stringency of the definition used, variable numbers of patients reached remission at 18 months: 162 (53%) had SJC=0; 108 (35%) SJC+TJC=0; and 56 (18%) Boolean.
Remission at 18 months was negatively associated with persistence of HIGH