

similar underlying pathologic processes and share a general deregulation of the inflammatory response.

**Objectives:** To evaluate PD markers in first-degree relatives (FDR) of consanguinity individuals of patients with rheumatoid arthritis to compared with controls and to establish an association to rheumatic activity according to age groups

**Methods:** 201 FDR individuals and 201 matched controls were included. Clinical evaluation of rheumatologic and periodontal condition was performed. *P. gingivalis*, *P. gingivalis* IgG1 and IgG2, ESR, CRP, RF, ACPAs, painful and swollen joints were assessed. A frequencies analysis, comparisons and a logistic regression model were made. The study was approved by local ethics committee.

**Results:** 37.3% of patients with overweight and 10.1% obese. Subjects with more than one swelling joint were 21 subjects <30 years, 5 between 31–40, 5 between 41 to 50 subjects and 9 subjects over 50, for more one painful joint were 73. The RF was present in 8.0%, APCA in 13%, RA33 in 1%. 67.3% had a diagnosis of PD, 81.6% had a moderate-severe  $p=0.003$ . *P. gingivalis* was in 47.9%, and *P. gingivalis* IgG1 were in 54.7%. It was evidenced that 25.3% patients presented BMI>30, where 81.8% had periodontitis  $p=0.006$ . Regression analysis on the whole group shows a risk to present BMI>25 (OR 1.67 IC-95% 1.02 – 2.74  $p=0.042$ ), ACPAs (OR 3.7 IC-95% 1.34–10.22  $p=0.012$ ), at least one pain joint (OR2.51 IC-95% 1.42–4.44  $p=0.001$ ) and gingival index (OR4.57 IC-95% 1.76–11.80  $p=0.002$ ) in FDR individuals. Based on age the risk to develop PD was increasing: individuals among 30 to 40 years shows OR 2.76 (IC-95% 1.24–6.18,  $p=0.013$ ); among 41 to 50 years, OR 4.72 (IC-95% 1.81–12.32,  $p=0.001$ ); and for >50 years individuals an OR 6.22 (IC-95% 2.55–15.1,  $p=0.0001$ ). The discriminating analysis by age rank shows that FDR individuals <30 years ( $n=67$ ) exhibited high risk to have at least one pain joint (OR 3.84 IC-95% 1.28–11.47  $p=0.016$ ). In subjects among 30 to 40 years ( $n=46$ ), the risk was associated with periodontal pocket (OR1.44 IC-95% 1.05–4.98  $p=0.021$ ), one or more pain joint (OR 3.56 IC-95% 1.22–10.40  $p=0.020$ ) which it was maintained until 50 years individuals ( $n=35$ ) (OR4.32 IC-95% 1.11–16.78  $p=0.0034$ ), individuals >50 years ( $n=53$ ) show high risk to present BMI>25 (OR 4.00 IC-95% 1.46–10.45  $p=0.007$ ).

**Conclusions:** Obesity, ACPA and periodontitis can be considered as relevant conditions associated with the development of RA in FDRs. However, the analysis based on age group shows that periodontal markers do not appear early in FDR individuals; however, clinical rheumatologic variables are manifested and maintained over time.

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**Disclosure of Interest:** None declared

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### THU0138 DAS 28 CORRELATED POORLY WITH THE OBJECTIVE EVIDENCE OF INFLAMMATION AS DETECTED BY ULTRASOUND (US) EXAMINATION OF HANDS AND FEET IN PATIENTS WITH ESTABLISHED RHEUMATOID ARTHRITIS (RA)

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**Background:** The Disease Activity Score including 28 joint count (DAS-28) is the most widely used outcome measure in RA. However, despite evidence that metatarsophalangeal (MTP) joints are often the first joints affected in RA, DAS-28 score does not incorporate them.

**Objectives:** Our study aimed to investigate the correlation between DAS-28 assessment and objective evidence of active joint inflammation using the US examination of both hands and feet, including wrists, metacarpophalangeal (MCP), proximal interphalangeal (PIP), and MTP joints.

**Methods:** A retrospective study was conducted, including 87 patients who were referred to the US clinic for an examination of their hands and feet in the last 6 months (46 patients with RA and 43 controls - patients with other inflammatory or degenerative arthropathies). Information about demographics, disease duration, current treatment, inflammatory markers, and DAS-28 scores was captured. The US OMERACT criteria were used for grading synovial hypertrophy, and assessing for the presence of Power Doppler (PD) signal, erosions and osteophytes. Statistical analysis methods included T-test, Mann-Whitney U test, Z score for proportions and Spearman's correlation coefficients.

**Results:** In the RA group, DAS-28 had a weakly positive correlation with the cumulative PD scores of their hands and feet joints ( $R=0.14$ ,  $P=0.02$ ), but did not correlate with PD score of MTP joints ( $R=0.03$ ,  $P=0.09$ ). In the control group, DAS-28 did not correlate significantly with either the total PD scores of feet ( $R=0.42$ ,  $P=0.26$ ) or hands and feet joints ( $R=0.5$ ,  $P=0.25$ ). Sensitivity of US examination of hands alone compared to hands and feet was 74.3% for the RA group, while the sensitivity of US feet to detect the presence of PD was 59.2% when compared to the US of both hands and feet.

**Conclusions:** We found that DAS-28 correlated poorly with objective evidence of inflammation as detected by US of the hands and feet, and this correlation was lost when only the presence of inflammation in the feet was taken into consideration. Further validation of our results in a larger study including patients stratified based on the disease duration might help understand which patient subgroups are more likely to have their disease activity significantly under-evaluated using DAS-28 outcome measure.

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### THU0139 DEPRESSIVE SYMPTOMS AND VITAMIN D IN PATIENTS WITH EARLY ARTHRITIS

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**Background:** There is a high prevalence of depression in patients with rheumatic disorders. Especially, in rheumatoid arthritis, it is one of the most prevalent co-morbidities with 16% to 38%. Vitamin D (VD) deficiency is one of the known risk factors for depressive disorders. On the other hand, a VD deficiency has often been detected in rheumatic diseases. A possible correlation between these two co-morbidities has not been investigated so far in patients with early arthritis (EA).

**Objectives:** The aim of this study was to examine the association between VD deficiency and depression and/or anxiety disorders in patients who have presented themselves for the first time in the EA clinic.

**Methods:** Patients with a suspected EA (at least one swollen joint without previous trauma or joint infection with a symptom duration of 6 weeks to 12 months) received a screening date within five work days. The VD status (25-hydroxy-VD<sub>3</sub>) was obtained during the first EA clinic consultation. In addition, each patient completed questionnaires on the disease history, as well as evaluated self-assessment questionnaires including the health assessment questionnaire (HAQ) and the Hospital Anxiety and Depression Scale (HADS). The hereby-obtained results of disease activity, VD-status and HADS-scores were investigated. In the observation period from June 2012 to March 2015, 75 patients fulfilled the inclusion criteria of completed results and questionnaires as well as a disease duration of less than 12 months.

**Results:** The mean age of this EA cohort was 51.7±16.9 years ( $\varphi$  65.3%, mean disease duration: 4.0±3.0 months). The prevalence of VD deficiency (<75 nmol/l) was 73.3%. 48.0% of EA patients showed a positive global distress score ( $\geq 13$ ). The mean HADS global distress score in VD sufficient patients was 10.2±8.6 vs 13.3±6.9 in deficient patients. The observed difference was not statistically significant. There was neither an association between gender, age and VD status nor was there any difference in the laboratory parameters (e.g. C-reactive protein, rheumatic factor, anti citrullinated peptide, hemoglobin) or assessment of functional status (e.g. HAQ, disease activity score by 28 joints).

**Conclusions:** The prevalence of VD deficiency is higher in EA patients with 73% than in the general German population (vs. 60%). The prevalence of positive distress with 50% is also higher. Interestingly, no association of deficient VD levels and positive distress in the HADS was detected in our examined EA cohort. This might be explained by the early stage of disease, but further studies are necessary to evaluate this new insight.

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### THU0140 SPECKLE TRACKING ECHOCARDIOGRAPHY EVALUATION OF CORONARY TERRITORIES IN MEXICAN MESTIZO PATIENTS WITH RHEUMATOID ARTHRITIS

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**Background:** The main cause of death in patients with rheumatoid arthritis (RA) is atherosclerotic cardiovascular disease. Speckle Tracking Echocardiography (STE) is an imaging technique that analyses the local and global myocardial function by assessing the myocardial deformation (strain). This technique is useful in addressing early alterations in ischemic pathologies (1,3).

**Objectives:** The aim of this study was to analyze if longitudinal strain abnormalities correspond with vascular territories, and compare the results between RA-patients and matched controls.

**Methods:** An observational cross-section case-control study was designed. Patients that fulfilled the 1987 ACR and/or 2010 ACR/EULAR classification criteria for RA, were 40–75 years old, with no overlap syndromes and no history of atherosclerotic cardiovascular disease were included. The control group was integrated by age- and sex-matched subjects, with no rheumatologic or cardiovascular diseases. A standard transthoracic echocardiogram was performed by a