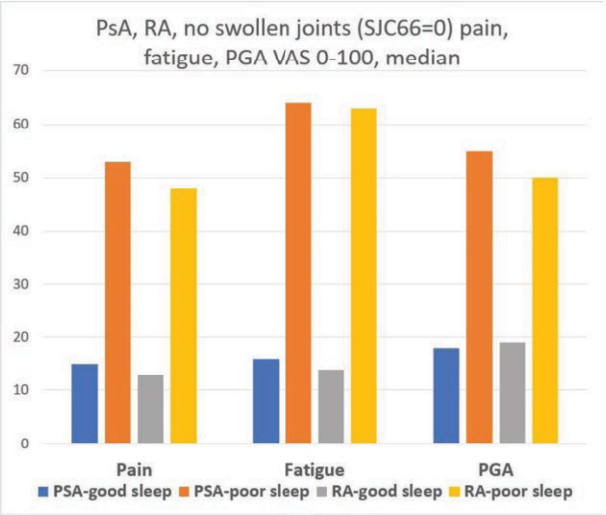

Figure 1. Median VAS-values for pain, fatigue and PGA in patients with PsA and RA with poor sleep and good sleep. All patients had no swollen joints.

REFERENCES: NIL.
Acknowledgements: NIL.
Disclosure of Interests: None Declared.
DOI: 10.1136/annrheumdis- 2023-eular.5392

POS0448

IDENTIFICATION OF JOINT LOCATIONS IN AN EARLY RHEUMATOID ARTHRITIS COHORT AS A CHARACTERISTIC OF DISEASE SEVERITY AND RESPONSE TO METHOTREXATE, DATA FROM THE ERA-UCLOUVAIN BRUSSELS COHORT

Keywords: Descriptive studies, Rheumatoid arthritis, Prognostic factors

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Background: Early RA patients (ERA pts) often present with different areas of joint involvement, but limited data exist to identify which specific joint locations may be indicative of greater disease severity.
Objectives: This analysis investigated the baseline (BL) prevalence of swelling, tenderness and erosions in individual joint locations and their possible association with disease characteristics, prognostic factors and response to Methotrexate (MTX) in a cohort of ERA pts.
Methods: This analysis was based on data from the ERA UCLouvain Brussels cohort in which patients were included according the ACR/EULAR 2010 criteria and naïve to DMARDs. The physician assessed prevalence of BL individual swollen and tender joint status (present, absent) through a physical examination. The joint count includes 44 joints. Similarly, all patient and RA characteristics were collected. The association between BL swelling, tender, erosions and disease characteristics was investigated for each individual joint. Remission rates (DAS28-CRP < 2.6) in patients treated only with MTX were assessed in order to analyze the correlation with BL joint location.
Results: BL location of each swollen, tender, or erosive joint (44 joints) is summarized in Table 1:

Table 1.

N=452*2	Total Erosives (%)	Total Swollen (%)	Total Tender (%)
Shoulders	2 (0%)	27 (3%)	225 (25%)
Elbows	0 (0%)	74 (8%)	139 (15%)
Wrists	**69 (8%)**	**515 (57%)**	**459 (51%)**
Knees	1 (0%)	186 (21%)	270 (30%)
Ankles	1 (0%)	209 (23%)	266 (29%)
MCP1	29 (3%)	**251 (28%)**	266 (29%)
MCP2	47 (5%)	**311 (34%)**	**303 (34%)**
MCP3	36 (4%)	**235 (26%)**	272 (30%)
MCP4	18 (2%)	75 (8%)	161 (18%)
MCP5	21 (2%)	89 (10%)	174 (19%)
PIP1	8 (1%)	89 (10%)	96 (11%)
PIP2	18 (2%)	**351 (39%)**	**338 (37%)**
PIP3	14 (2%)	**358 (40%)**	**332 (37%)**
PIP4	17 (2%)	178 (20%)	242 (27%)
PIP5	11 (1%)	151 (17%)	221 (24%)
MTP1	**53 (6%)**	67 (7%)	187 (21%)
MTP2	**55 (6%)**	166 (18%)	281 (31%)
MTP3	**80 (9%)**	169 (19%)	295 (33%)
MTP4	45 (5%)	114 (13%)	263 (29%)
MTP5	**128 (14%)**	70 (8%)	192 (21%)

The most frequent swollen joint was the wrist (57%), followed by PIP3 (40%) and PIP2 (39%), MCP2 (34%), MCP1 (28%) and MCP3 (26%). Erosions were most frequent in MTP5 (14%), MTP3 (9%), wrists (8%), MTP1 and MTP2 (6%). Swollen and tender joints were well associated except for shoulder (3% vs 25%), wrist (8% vs 15%) and MTP (see table 1).We found a significant correlation between erosion and swelling for wrists, MCP1-3 joints and MTP1-5 joints. As expected, erosive joint was observed first in MTP5 (14%) followed by the MTP3 (9%) and the wrist (8%). MTP4 and 5 joint locations were more present in younger and MCP 2-4 in older patients. BL swelling in the large size joints (knee, elbow, shoulder and ankle), in the medium size joint (wrist) and the small size joints (only MCP3, IPP 1, 2 and MTP5) was highly associated with higher DAS28-CRP*. BL swelling of the MCP1, 3, 4; MTP 1,2, 5 was associated with erosive disease. In contrast, swelling of the knee was correlated with non erosive and seronegative RA. Swelling of joint location such as knee, shoulder, ankle, MCP 1-5, MTP1, 5 and IPP 1, 2 was significantly correlated with a higher HAQ. Only swelling of MTP1, 2, 5 was associated with the presence of ACPA antibodies. No difference was observed for smoking habits and gender. Comparison between BL joint location in patients achieving remission or not has been evaluated. Patients with BL erosion and swelling in the feet responded less to MTX of non-response (respectively 18,2% vs 35.1% and 25% vs 35.1%). For patients with swollen wrist, we observed the same trend without significance. Smoking habits and rheumatoid factor positivity were more present in the non-responder group (29.6% and 66.1% versus 14% and 46.5%).

Conclusion: In our cohort of ERA naïve to DMARD, swelling was most present in wrist and hand joints (PIP 3 and 2). Erosions were most frequent in MTP joints and wrist. Clinical response to MTX was poorer in patients with swelling of the wrist and feet as well as erosion of the feet. Joint location could be an additional prognostic factor in ERA for severity and response to MTX suggesting more intensive therapy.
Acknowledgements: This work was supported by CAP48/RTBF.
Disclosure of Interests: None Declared.
DOI: 10.1136/annrheumdis- 2023-eular.3690

POS0449

PRESENCE OF PERIODONTAL DISEASE AND THE INCIDENCE OF INFLAMMATORY ARTHRITIDES IN THE GENERAL POPULATION: DATA FROM THE UK BIOBANK

Keywords: Rheumatoid arthritis, Psoriatic arthritis, Inflammatory arthritides

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Background: Patients with inflammatory arthritides (IA) are now recognized to present with inflammation in the periodontium frequently. However, the association between signs of periodontal inflammation and IA onset has been poorly described in the existing literature.
Objectives: To investigate the association between periodontal disease and the development of inflammatory arthritides (IA) in the general population.
Methods: In total, 489,125 participants from the UK Biobank without a previous history of rheumatoid arthritis (RA), ankylosing spondylitis (AS), and psoriatic arthritis (PsA) were enrolled. The primary outcome was the incidence of IA, which was a composite of RA, AS, and PsA according to the presence of periodontal disease based on self-reported oral health indicators. Multivariate Cox proportional hazard regression analyses using four different models were performed to assess the association between periodontal disease and IA development.
Results: In all, 86,905 and 402,220 individuals were categorized as with and without periodontal disease, respectively. Cox hazard analysis indicated that the presence of periodontal disease was an independent predictor of the occurrence of composite outcomes of IA, which was also consistent for RA and AS. Significant associations were found to be consistent in the four Cox models and were replicated even when different criteria were used to define periodontal disease. Subgroup analyses indicated that periodontal disease was associated with an increased RA risk in those aged <60 years, and this risk was persistent for both male and female patients and for patients with seropositive/seronegative RA.
Conclusion: Self-reported periodontal disease is associated with IA incidence in participants included in the UK Biobank, particularly for RA and AS. Higher clinical attention and optimal dental care in patients with signs of periodontal disease may be recommended for early disease detection and for reducing this risk.