POS0506

TENOSYNOVITIS HAS A HIGH SENSITIVITY FOR EARLY ACPA-POSITIVE AND ACPA-NEGATIVE RA: A LARGE CROSS-SECTIONAL MRI STUDY

X. Matthijssen¹, F. Wouters¹, N. Sidhu¹, E. Niemantsverdriet¹, A. van der Helm-van Mil^{1,2}. ¹Leiden University Medical Center (LUMC), Rheumatology, Leiden, Netherlands; ²Erasmus MC, Rheumatology, Rotterdam, Netherlands

Background: Clinically evident tenosynovitis can be seen in established Rheumatoid arthritis (RA). Imaging research has recently shown that tenosynovitis at small joints occurs in early RA, contributes to typical RA symptoms (including joint swelling) and is infrequent in healthy controls. Imaging-detectable tenosynovitis is often not recognizable at joint examination, hence its prevalence can therefore be underestimated.

Objectives: We hypothesized that if MRI-detectable tenosynovitis is a true RA-feature, the sensitivity for RA is high, in both ACPA-positive and -negative RA, and lower in other diseases that are associated with enthesitis (such as Spondyloarthritis (SpA) and Psoriatic Arthritis (PsA)). So far, no large MRI-study addressed these questions.

Methods: Consecutive early arthritis patients (n=1211) from one health-care region underwent contrast-enhanced 1.5T MRI of hand and foot at diagnosis. MRIs were scored for synovitis and tenosynovitis by two readers blinded for clinical data. All included patients with ACPA-positive RA (n=250), ACPA-negative RA (n=282), PsA (n=88), SpA with peripheral arthritis (n=24), reactive arthritis (n=30) and self-limiting undifferentiated arthritis (UA; n=76) were studied. Sensitivity was calculated.

Results: The sensitivity of tenosynovitis in RA was 85%; 88% for ACPA-positive RA and 82% for ACPA-negative RA (p=0.19). The sensitivity for RA was significantly higher than for PsA (65%; p<0.001), SpA (53%; p<0.001), reactive arthritis (36%; p<0.001) and self-limiting UA (42%; p<0.001). The observed sensitivity of MRI-synovitis was 91% in RA and ranged 83-54% in the other groups.

Conclusion: MRI-detected tenosynovitis has a high sensitivity for early ACPA-positive and ACPA-negative RA. This supports both juxta-articular (tenosynovitis) and intra-articular synovial involvement is characteristic for RA.

Figure 1. Presence of tenosynovitis (in black) in wrist MCPs and MTPs, in rheumatoid arthritis, stratified by ACPA-status and compared to other diseases. **Legend:** RA: Rheumatoid arthritis; ACPA: anti-citrullinated protein antibodies; UA: undifferentiated arthritis

Disclosure of Interests: None declared

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POS0507

UNUSUALLY HIGH PREVALENCE OF ATRIAL FIBRILLATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

B. Mukerji¹, F. Wang¹, R. Markert², V. Mukerji³. ¹Dayton Veteran Administration Medical Center, Rheumatology, Dayton, United States of America; ²Wright State University, Medicine, Dayton, United States of America; ³Dayton Veteran Administration Medical Center, Cardiology, Dayton, United States of America

Background: In rheumatoid arthritis, circulating autoantibodies like anticyclic citrullinated peptides and rheumatoid factor may be present for years prior to symptom onset. In RA, there are high levels of circulating tumor necrosis factors, interleukins, matrix metalloproteinases, growth factors, and adhesion molecules that cause tissue damage^{1,2}. This can affect different organs in different ways. It is possible that in the heart, they cause inflammation of cardiac tissue^{3,4}.

Objectives: This study was conducted to determine if patients with RA, an inflammatory arthritis, and osteoarthritis (OA), a degenerative arthritis, differ in the prevalence of cardiac arrhythmias.

Methods: This was a retrospective study. We enrolled 300 consecutive patients, 150 with RA and 150 with OA. Patients were assessed for age, race, gender, body mass index (BMI), smoking status, hypertension (HTN), hyperlipidemia (HLD), diabetes mellitus (DM), cardiovascular disease (CVD), coronary artery disease (CAD), cardiac arrhythmias including conduction abnormalities, cerebrovascular accident (CVA), congestive heart failure (CHF), abdominal aortic aneurysm (AAA), pulmonary embolism (PE), deep vein thrombosis (DVT), and peripheral vascular disease (PVD). RA and OA groups were compared with the chi square test and the Mann-Whitney test.

Results: The RA and OA groups did not differ on the demographic characteristics of age or race. The presence of DM was similar in the two groups. The RA group had more women than the OA group (12.7% vs. 5.3%, p=0.026). The OA group had a higher mean BMI (33.1 vs 30.0, p<0.001) and higher prevalence of HLD (78.9% vs 64.6%, p=0.007) and HTN (79.3% vs. 66.7%, p=0.013). RA patients had a higher rate of smoking (70.0% vs 56.7%, p=0.017) and longer duration of smoking (34.3 years vs. 28.2 years, p=0.003). The RA group had a higher prevalence of CVD (58.7% vs. 42.7%, p= 0.006). Further data analysis among CVD showed there was no difference between the two groups for the prevalence of CAD, CHF, CVA, AAA, PVD or DVT/PE. RA patients had a higher prevalence of cardiac arrhythmias (31.3% vs. 12.0%, p<0.001). Among all types of cardiac arrhythmias, no significant difference was found between two groups for the prevalence of supraventricular tachycardia, ventricular arrhythmias, or conduction abnormalities. Patients with RA had a significantly higher prevalence of atrial fibrillation (15.3% vs. 6.0%, p = 0.015).

Conclusion: Cardiac arrhythmias occur more frequently in RA patients than in OA patients. Among all the arrhythmias, atrial fibrillation has a significantly higher prevalence in RA patients.

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POS0508

EVALUATION OF RESPONSE TO PNEUMOCOCCAL VACCINATION IN PATIENTS WITH RHEUMATOID ARTHRITIS RECEIVING UPADACITINIB: RESULTS FROM A PHASE 2 OPEN-LABEL EXTENSION STUDY

K. Winthrop¹, J. Ignacio Vargas², E. Drescher³, C. Garcia Garcia⁴, A. Friedman⁵, J. Enejo⁵, N. Khan⁵, Y. Li⁵, J. Klaff⁵, A. Kivitz⁵. ¹Oregon Health & Science University, Infectious Disease, Portland, United States of America; ²Quantum Research, Medicine, Puerto Varas, Chile; ³Veszprém Csolnoky, Ferenc County Hospital, Veszprém, Hungary; ⁴Hospital General de México, "Dr. Eduardo Liceaga", Mexico City, Mexico; ⁵AbbVie Inc., Rheumatology, North Chicago, United States of America; ⁶Altoona Center, Clinical Research, Duncansville, United States of America

Background: Pneumococcal vaccination is recommended in patients with RA who are receiving conventional synthetic/biologic DMARDs.¹ Upadacitinib (UPA) is an oral Janus kinase (JAK) inhibitor engineered to have a greater selectivity for JAK1 versus JAK2, JAK3, and tyrosine kinase 2, and is approved for the treatment of RA. **Objectives:** The aim of this analysis was to assess the impact of long-term treatment with UPA + background MTX on immunologic responses to Prevnar 13® (Pneumococcal 13-valent Conjugate Vaccine [Diphtheria CRM₁₉₇ Protein];