cases with RA (60% vs. 100%, p < 0.029), in 2 with PsA (20% vs. 100%, p = 0.01), 3 cases in healthy volunteers (30% vs. 100%, p = 0.01).

Conclusions: The results of the present study indicate that US is a very sensitive and specific technique for detecting calcifications in patients with crystal-related arthropathy. The US findings were detected a trend of association between CC and RA. However, more studies, involving a larger number of pts, are required.

REFERENCES:

Disclosure of Interest: None declared

FRI0591

WHOLE-BODY MRI DEMONSTRATES REDUCTION OF INFLAMMATION IN PERIPHERAL JOINTS AND ENTHESUSES DURING TNF-INHIBITOR TREATMENT IN PATIENTS WITH AXIAL Spondyloarthritis, BUT ALSO AGE-DEPENDENT PERSISTENT INFLAMMATION IN JOINTS PRONE TO OSTEOARTHROSI S

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Background: Patients with predominantly axial spondyloarthritis (axSpA) may also have inflammation of peripheral joints and entheses. Using a whole-body MRI (WBMRI) approach, peripheral joints and entheses can be assessed objectively and followed during treatment.

Objectives: To describe the localization and extent of inflammation of peripheral joints and entheses by WBMRI in patients with axSpA initiating TNF-inhibitor therapy, and to assess treatment-induced changes.

Methods: Fifty-three patients that fulfilled the ASAS criteria for axSpA were included. MRI of SUs and spine and WBMRI of peripheral joints and entheses were performed at baseline and at 4/16/52 weeks after starting TNF inhibitor treatment. 75 peripheral joints and 30 peripheral entheses were scored in chronologically order by an experienced musculoskeletal radiologist (IE). Osseitis, synovitis and entheseseal soft tissue inflammation were scored separately [0(none)/1(mild)/2 (moderate/severe)]. A WBMRI peripheral joint and enthesis index (WBMRI index) was derived by summing scores of all peripheral lesions.

Results: Median age (IQR/range) was 35 years. (28–40 after 52 weeks (n=46) 4 (2–9; 0–26). WBMRI index decreased mean 0.6 at week 4 (p=0.17, paired t-test), 2.3 at week 16 (p<0.001) and at week 52. In multivariate regression with age and sex as covariates, only age was significantly associated with WBMRI index (2.3 per 10 years increase in age, p=0.021) whereas sex was not (p=0.24).

In univariate analysis, higher age was not significantly associated with change in WBMRI index, but when adjusted for baseline WBMRI index, higher age was associated with a less prominent reduction in WBMRI index (+0.9 per 10 years increase in age).

Conclusions: Inflammation of peripheral joints and entheses decreased over time in a cohort of patients with predominantly axSpA. Most patients had WBMRI index above zero during follow-up, and this was related to age and involved sites prone to osteoarthritis. Thus, the WBMRI Index may capture both disease activity related to axSpA and age-related degenerative changes.

Disclosure of Interest: None declared

FRI0592

SCORING MRI INFLAMMATION AND STRUCTURAL LESIONS IN SACROILIAC JOINTS OF PATIENTS WITH AXIAL Spondyloarthritis: IS INTER-READER RELIABILITY DEPENDENT ON THE NUMBER OF MRI SLICES?

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Background: The SPARCC sacroiliac joint (SIJ) scoring system assesses 6 semicircular MRI slices for inflammation and 5 slices for structural lesions in patients with axial spondyloarthritis (axSpA). However, the cartilaginous SIJ compartment may show 1–2 additional slices anteriorly or posteriorly, depending on body size and scan orientation/tilt.

Objectives: To investigate inter-reader reliability of an “all slices” approach versus the standard SPARCC scoring of 6/5 slices.

Methods: Fifty-three patients with axSpA were treated with TNF inhibitor and had MRIs obtained at weeks 0/4/16/52. An experienced (UW) and two newly trained (GK, SK) blinded readers independently scored 199 SIJ MRI scans in chronologically order. The cartilaginous SIJ compartment was scored slice by slice by the SPARCc 6/5 slices approach and by all available cartilaginous slices. Initially, the most anterior and posterior slices covering the cartilaginous compartment and the transitional compartment were identified. The transitional slice was defined as the most anterior cartilaginous slice with the first portion of the ligamentous compartment, clearly visible on the left and/or right side. We scored SIJ inflammation, fat metaplasia, erosion and backfill, and a combined erosion and backfill score was created. Inter-reader reliability for reader pairs SK-UW/GK-UW/SK-GK was assessed using percent agreement (for individual scores) and intra-class correlation coefficients for sum scores.

Results: Pairwise percent agreement was 67%/63%/79% for identification of anterior slice, 47%/56%/44% for posterior slice and 69%/68%/72% for transitional slice. Using the “all slices” approach, readers UW/SK/GK scored mean 7.2/7.7/7.0 slices per MRI scan.

6/5 slices “and all slices” correlated closely with each other for status scores at baseline/status scores at week 52, and change scores at week 52; BME 0.983/ 0.985/0.983; fat metaplasia 0.994/0.982/0.953; erosion 0.981/0.974/0.957; backfill 0.993/0.983/0.978; combined erosion and backfill 0.983/0.971/0.919.

Conclusions: The standardised 6/5 slices SPARC methods had equal reliability as compared to evaluation of all cartilaginous slices. There was limited reliability to identify the posterior slice in the “all slices” approach, as opposed to good reproducibility to determine the transitional slice in the “6/5 slices” approach. Combining erosion and backfill scores tended to result in superior reliability compared to the 2 lesions separately, indicating a challenge to identify the transition from erosion to backfill.

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MANTOUX TEST IS INADEQUATE TO DEFINE ALL SUBJECTS WITH LATENT TUBERCULAR INFECTION
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Background: Latent TB infection (LTBI), defined as ‘a state of persistent immune response to Mycobacterium tuberculosis without clinically manifested disease’, inflicts a third of the world’s population and nearly 10% of LTBI positive persons develop TB within 2–5 years. The tuberculin skin test (TST) and, more recently, interferon gamma release assays (IGRAs) are most commonly used for detection of LTBI. However, in a high TB burden setting such as India, both the assays have been found to grossly underestimate the true prevalence of LTBI, since almost equal number of new TB cases emerged from the test-positive and test-negative groups during the follow-up1.

Objectives: This study was aimed at exploring whether an in vitro CD3 + T cell response to PPD can complement the in vivo TST response for the determination of true prevalence of TT in healthy Indians.

Methods: In this ongoing study, 80 apparently healthy workers (age 19–61 years) at SGPGIMS have been recruited. Their demographic data, including BCG vaccination status and duration of contact with TB patients, was recorded. TST was performed with 5TU of PPD. Blood T cell (CD3+) responses to PHA (a mitogen, used as positive control) and PPD were determined by flow cytometry in terms of expression of the proliferation-induced nuclear protein Ki67.

Results: 48% of the study subjects showed positivity for TST (skin induration ≥ 10 mm) and the size of reaction could be correlated with age. There was no association between BCG vaccination status and TST positivity. 72% of the TST positive and 62% of TST negative persons showed positivity for CD3 + T cell response to PPD. Positivity for either assay was found to be 82%.

Conclusions: By combining TST with CD3 + T cell responses, the positivity for PPD was enhanced from 48% (TST alone) to 82%. Therefore, both the assays could be considered as complementary. It remains to be seen whether these assays, either singly or jointly, show a correlation with the emergence of TB in our study population during the follow-up.

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