of damage development. There are currently no general accepted procedural guidelines regarding PET imaging acquisition for LVV and PMR.

Objectives: The aim of our study is to provide recommendations and statements, based on the available evidence in the literature combined with consensus of experts in the field, for patient preparation, FDG-PET/CT(A) acquisition and interpretation.

Methods: A systematic literature review was conducted to retrieve data on FDG-PET/CT(A) imaging in LVV and PMR. Expert consensus was used to propose recommendations in the absence of sufficiently robust data. Levels of evidence and grades of recommendations were attributed to the statements of different indications according to published criteria.

Results: Based on the literature review combined with expert consensus recommendations and statements that could be formulated: see table 1.

Conclusions: This joint recommendation highlights that standardisation and general consensus regarding the optimal procedural performance of FDG-PET/CT(A) imaging in LVV and PMR are highly needed. Some recommendations and statements could be formulated however, there are also a lot of open issues which need to be studied for optimal performance of FDG-PET/CT(A) in the diagnosis, treatment/monitoring and future theranostics in LVV/PMR to increase the levels of evidence and improve the grades of the recommendations.

Disclosure of Interest: None declared


FR10590

ULTRASOUND EXAMINATION OF THE WRIST JOINTS: FREQUENCY OF CRISTAL DEPOSITS (CHONDROCALCINOSIS) IN PATIENTS WITH DIFFERENT ARTHROPATHIES

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Background: Hand involvement in the rheumatic diseases is often precocious and predominant as compared to other skeletomuscular regions. The Ultrasound (US) has an important role in early calcium pyrophosphate deposition disease (CPPD) diagnosis. Recent studies suggest a positive associated of CPPD and other rheumatic disease.1,2

Objectives: To investigate the frequency of the US features of chondrocalcinosis (CC) at the triangular fibrocartilage complex (TFC) of the wrist in patients (pts) with different arthropathies.

Methods: A total of forty persons were included in the study and were divided into 4 groups (on ten in each group): basic group – CPPD pts (crystal-proven at synovial fluid analysis; median age 58.5 (range 45–63) years; 6M/4F) and the control pts (crystal-proven at synovial fluid analysis; median age 58.5 (range 45–63) years; 6M/4F); psoriatic arthritis pts (PsA, CASPAR criteria; age 50(37–59) years; 3M/7F), healthy volunteers (age 37.5 (33–55) years; 3M/7F). All subjects were fully age and gender matched with the CPPD pts. The Mann-Whitney U-test was applied for intergroup comparison.

Results: In all CPPD pts (100%) CC of TFC was detected in at least one joint. In the control groups intra-cartilaginous hyperechoic spots were found in 6 of 10
cases with RA (60% vs. 100%, p=0.029), in 2 with PeA (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

FR0592

WHOLE-BODY MRI DEMONSTRATES REDUCTION OF INFLAMMATION IN PERIPHERAL JOINTS AND ENTHESES DURING TNF-INHIBITOR TREATMENT IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS, BUT ALSO AGE-DEPENDENT PERSISTENT INFLAMMATION IN JOINTS PRONE TO OSTEOARTHRITIS

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Background: Patients with predominantly axial spondyloarthritis (axSpA) may also have involvement of peripheral joints and entheseus. 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 SIJs and spine and WBMRI of peripheral joints and entheses were performed before starting TNF inhibitor treatment. 75 peripheral joints and 30 peripheral entheses were scored in chronologically ordered by an experienced musculoskeletal radiologist (IE). Ostesitis, 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 (IOR range) was 35 years. (28–44/22–73); median symptom duration was 5 years. (3–130/30–53); 53% were male. Baseline median WBMRI index (n=53) was 7.3. 4–14. 4–20 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 3.2 at week 52 (p=0.001). Thirty-seven patients (70%) had a relatively low baseline WBMRI index (<10) with minor change over time, while patients with higher baseline scores tended to change more (figure 1A). The most frequently involved sites (15% of patients) were typical for SpA (sternoclavicular joint/plantar fascia) or osteoarthritis (carpometacarpal-1/metatarsophalangeal-1 synovitis). In univariate analysis, WBMRI index at week 52 was associated with age (2.5 higher per 10 years increase in age, p<0.001) and male sex (3.6 lower in men, p=0.021), but not with body-mass index, HLA-B27, C-reactive protein or ASDAS 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<0.001) 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

FR0592

SCORING MRI INFLAMMATION AND STRUCTURAL LESIONS IN SACROILIAC JOINTS OF PATIENTS WITH AXIAL SPONDYLOARTHITIS: 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 semicoronal 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 ordered. The cartilaginous SIJ compartment was scored slice by slice by the SPARC6/5 slices approach and by all available cartilaginous slices. Initially, the most anterior and posterior slices covering the cartilaginous compartment and the transitional slice 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%–93%/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 7.2/7.7/7.7, 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.

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