tested interobserver agreement for several joints¹. The knee and the wrist were the most reliable sites for assessing CPPD.

Objectives: To assess whether the high level of inter-observer agreement of US for the detection of Calcium Pyrophosphate Deposition Disease (CPPD) in the triangular fibrocartilage complex (TFCC) of the wrist found by the experienced rheumatologists of the OMERACT group² could be reproduced in real life

Methods: The OMERACT US criteria for identification of CPPD were utilised for this exercise on pre-recorded static images using a dichotomous score among several radiologists (n=2) and rheumatologists (n=5) with varying level of experience in musculoskeletal ultrasonography (range: 2–10 years). Firstly, the same 15 US images of the wrist that had been evaluated by the OMERACT panel were sent for evaluation to the local participants in order to calculate the inter-observer agreement. Secondly, 22 additional wrist US images extracted from locally performed examinations, in patients with a high suspicion of CPPD arthritis were evaluated. These local US examinations were performed in real life conditions, by different operators, on different machines and without prior standardisation of the procedure. For comparison, interobserver of wrist radiographs was also evaluated for all local patients

Results: The mean overall agreement and kappa values on the OMERACT panel US images were 0.89 and 0.78 respectively. These values are similar to those obtained previously by the OMERACT panel during the web exercise with the same images (0.80 and 0.68 respectively). The interobserver agreement was lower with the local US images (0.70 and 0.49 respectively), probably due primarily to the absence of strict standardisation of US procedure and inferior image quality. For comparison, the performance on the local radiographs was similar (0.70 and 0.47 respectively).

Conclusions: Our results confirm that the new OMERACT US definitions for assessing wrist CPPD are reliable when applied to pre-recorded static images. Scanning technique and standardisation of the procedure appear to be an important aspect with regards to the assessment of CPP deposition at the wrist.

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SAT0640

WHOLE BODY-MRI IN AXIAL SPONDYLOARTHRITIS (AXSPA): DIFFUSION WEIGHTED IMAGING (DWI) OUTPERFORMS THE STIR SEQUENCE

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Background: None

Objectives: To compare the diagnostic value of DWI and STIR sequences as part of WB-MRI studies in AxSpA patients.

Methods: 20 consecutive patients (P) with confirmed diagnosis of active AxSpA and 20 controls (C) referred for metastatic cancer screening were investigated with identical WB-MRI protocols including DWI and STIR images. Two independent observers recorded the presence of "lesions" (high signal intensity foci on STIR and high b-value DWI images) in 17 anatomic areas; making a 17-point "area score" and a calculated 40-point "lesion score". Both were tested for correlation with clinical and biological parameters.

Results: In P, the "lesion score" was significantly higher with DWI than with STIR (p<0.025). The most experienced observer had higher DWI lesion scores, suggesting a learning effect. The lesion score and some anatomic areas could discriminate P from C. For this purpose, DWI had a higher AUC than STIR (AUC=99.9, CI: 99.5–1.00 vs AUC=95.8, CI: 90.9–1.00). For a trained MRI observer using DWI, a lesion score threshold of >4 had 100% sensitivity and 95% specificity. With STIR, a threshold of >3 had 85% sensitivity and 90% specificity. The area score AUC was significantly lower with STIR than with DWI (p=0.0233), but no satisfactory area score threshold was identified. The most frequently involved areas were the spine and hip entheses in C, the spine and SIJ in P. Manubrio- and chondro-sternal joint involvement was specific for AxSpA. The lesion score was positively correlated with ASDAS-CRP and (log) CRP.

Conclusions: DWI is a promising alternative to STIR in WB-MRI studies for the detection of active lesions in AxSpA. Training may be necessary. The involvement of specific anatomic areas could distinguish P from C.

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SAT0641

PERFORMANCE AND AGREEMENT OF DIFFERENT OPERATORS AND HISTOLOGICAL TECHNIQUES FOR THE ASSESSMENT OF GERMINAL CENTRES IN MINOR SALIVARY GLANDS IN PRIMARY SJÖGREN'S SYNDROME

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Background: A standardisation of minor salivary gland (MSG) histopathology in primary Sjögren's syndrome (pSS) has been recently proposed by the EULAR study group on Sjögren's syndrome. Although there is strong agreement that germinal centres (GCs) should be routinely identified, due to their prognostic value, a consensus regarding the best protocol is still lacking.

Objectives: Aim of this study was to compare the performance of different histological techniques and operators with variable experience in MSG histopathology to identify GCs in pSS MSGs.

Methods: MSG biopsies from 50 pSS patients were studied. Three blinded operators (expert rheumatologist, expert pathologist and rheumatologist with scarce experience on MSG histopathology) scored one slide stained with haematoxylin and eosin (H and E). Consecutive slides were processed by immunofluorescence and immunohistochemistry to assess CD3/CD20, CD21 and Bcl-6 expression.

Results: Overall, the prevalence of GC in MSG specimens (namely the presence of at least one focus positive for at least one operator or histological technique) ranged between 26% and 52%. By separate assessment of 225 foci, the best agreement was between H and E-stained sections evaluated by the expert rheumatologist and CD3/CD20 segregation (Cohen's kappa=0.72). In the foci with CD21 positivity, the agreement with the expert rheumatologist further increased (Cohen's kappa=0.75). Among the 3 methods employed, the best agreement was observed between B/T-cell segregation and the positivity for CD21 staining (0.84). The absence of Bcl-6 in a focus does not necessarily rule out the presence of the GC detected with other stainings.

Conclusions: GC assessment on H and E-stained sections should be performed with caution, as it is dependent on the background and expertise of the operator. The combination of H and E with CD3/CD20 and CD21 staining should be recommended as it is reliable, feasible, able to overcome the bias of operator experience and easily transferrable into routine practice.

Disclosure of Interest: None declared

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SAT0642

A CAD SYSTEM IN HEP-2 IIF READING: A MULTICENTRE STUDY

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Background: The indirect immunofluorescence (IIF) on HEp-2 cells is the recommended technique for anti-nuclear antibodies (ANA) detection. Automation of IIF image reading can provide a reliable basis for cost-effective serological diagnostics. Computer-aided diagnosis (CAD) tools based on digital imaging reading can help us to overcome the reader subjectivity. In a recent work¹ we assessed the inter-observer variability using digital images showing the 74.1% of agreement. It improved using "ground truth" as gold standard.