Abstract AB1168 – Table 1. Clinical & US examination details on knees & ankles of 10 children (40 joints)

Patients	Diagnosis	Rt Knee Clinical	Rt Knee US	Lt Knee Clinical	Lt Knee US	Rt Ankle Clinical	Rt Ankle US	Lt Ankle Clinical	Lt Ankle US
Pt 1	SJIA	+	+	+	+	-	+	+	+
Pt 2	SJIA	-	-	-	-	+	+	-	-
Pt 3	ERA	-	-	-	-	-	-	+	-
Pt 4	ERA	-	-	-	-	-	-	+	TP
									tenosynovitis
									TA
Pt 5	PJIA	-	-	-	-	-	+	-	-
Pt 6	PJIA	+	+	+	+	-	-	-	-
Pt 7	ERA	+	+	-	-	+	-	-	-
Pt 8	ERA	-	-	-	-	+	-	-	-
Pt 9	PJIA	+	+	+	+	-	-	+	+
Pt 10	PJIA	+	+	+	-	+	-	-	-

Abstract AB1168 – Figure 1

Conclusions: With gold standard as US for detection of synovitis, sensitivity of clinical examination-100% for knee, specificity-91.7%. For clinical examination of ankles, sensitivity-60% and specificity-66.7% suggesting possibility of mistaking an adjacent tendon sheath swelling for a TT joint disease. This has important implications for systemic therapies and intervention. The US is a valuable addition to clinical examination of the joints. Clinical examination alone in this pilot study of 10 children with JIA is inadequate to assess disease of the ankles. Evidence shows US to be superior to the clinical examination alone, but the lack of validated US findings, scoring systems and treatment algorithms exposes the need for further research.

Disclosure of Interest: None declared

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AB1169 CAN ULTRASOUND-DETECTED SYNOVITIS PREDICT RADIONUCLIDE SYNOVECTOMY EFFICACY IN CHRONIC INFLAMMATORY MONOARTHRITIS?

A.S. Amouzougan¹, H. Marotte², K. Boussoulam¹, L. Mijola¹, P. Collet¹, B. Pallot-Prades¹, N. Prevot-Bitot³, F.-G. Barral⁴, T. Thomas². ¹Rheumatology, Universital Hospital of Saint-Etienne; ²Rheumatology, Inserm 1059, Universital Hospital of Saint-Etienne; ³Nuclear Medecine; ⁴Radiology, Universital Hospital of Saint-Etienne, Saint-Etienne, France

Background: The better management of inflammatory joint diseases, including biological treatments, has not eliminated in the clinical practice the persistence of chronic inflammatory monoarthritis despite local glucocorticosteroids (GC) injection and optimal systemic treatment. No therapeutic consensus was proposed in this clinical situation. In addition, radionuclide synovectomy (RS) was proposed with no clear benefit-risk effect. However, it has been shown that ultrasound-detected residual synovitis is frequent and predictable to relapse and structural progression in rheumatoid arthritis patients.

Objectives: We explored ultrasound-detected synovitis predictive value of response to RS in chronic inflammatory monoarthritis.

Methods: A monocentric prospective study was performed including unclassified monoarthritis, rheumatoid arthritis, spondyloarthritis, and lupus between January 2012 and December 2017. All patients already received GC intra-articular injections (GCI) and were treated in particular by cs or bDMARDS. On the day of the RS performed by a radiologist under radioscopy control, all patients had an articular power Doppler (PD:0-3) with greyscale (GS:0-3) ultrasonography with a MyLab 60 – EASAPTE, by 2 experimented sonographers.

Primary endpoint (EP) was subjective overall improvement $\geq 50\%$ without of any GCI and/or surgical management at 6 months (M).

Chi-square test was used to check the difference between groups.

Results: Data from 23 patients, 17 women and 6 men, with mean age 54 ± 14 years were analysed. Eleven RA (45.5% RF + or ACPA+), 3 pSpA, 2 axSpA HLA B27+, 1 Lupus, and 6 unclassified monoarthritis (FR and ACPA-). Histological analysis of the synovium in 7 patients concluded to chronic nonspecific synovitis. Twenty eight joints were treated. Of them, 25 were coted US GS ≥ 2 and/or DP ≥ 2 . None had US GS=0 and DP=0. Effusion on US exam was reported in 24 joints.

On X-ray, 46.4% of patients had joint space narrowing and/or erosion. ESR or CRP increased in 43.5%. Forty five previous GCI were declared (Cortivazol or triamcinolone hexacetonide), with a median at 2.¹⁻⁶

Patients were treated with methotrexate, n=16 (69.6%), hydroxychloroquine, n=1, bDMARDS, n=11 (48%), oral GC, n=8 (35%) and non-steroidal anti-inflammatory drug, n=6 (26%).

At M6 and M12, 64.6% of patients reached the EP. One patient reached the EP only at M12 and another one only at M6. No significant differences were observed between groups in terms of PDUS (DP ≥ 2 vs DP ≤ 1), unclassified monoarthritis, and joint space narrowing and/or erosion.

Only one patient had pain exacerbation 24 hour after RS followed by a quick recovery.

Conclusions: In chronic inflammatory monoarthritis, PDUS was not predictive of clinical outcome after RS. However, this intra-articular procedure appeared effective in either unclassified or classified monoarthritis or in presence of radiographic joint lesions.

Disclosure of Interest: None declared

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AB1170 FIRST RESULTS OF THE RHEUMATOID ARTHRITIS HANDSCAN REGISTRY LEEUWARDEN

A. Al Hasan, R. Bos, N. Veeger, D. Zhang, L. Hendriks, F. Wink, A. Schilder, F. Reimann, K. Bergsma. MEDISCH CENTRUM LEEUWARDEN, Leeuwarden, Netherlands

Background: The handscan is a new technologic device which uses diffuse optical transmission in combination with blood flow modulation. It is a non-invasive measurement of joint inflammation potentially more sensitive than the clinical evaluation of the joints by a rheumatologist.¹ However, more clinical data is necessary before this new device can be implemented in the daily clinical practice.

Objectives: This study investigates the additional value of the handscan in decision making in the daily practice for patients with rheumatoid arthritis.

Methods: At our outpatient clinic we started a registry for rheumatoid arthritis patients with a disease duration of at least two years. During this period, a handscan will be made for all patients before every regular visit. Both the patient and the treating rheumatologist will be blinded to the handscan outcome. Primary outcome is the association between DAS28 score and the total optical score (TOS) of the handscan per visit.

Results: The study started in December 2017, until now 100 patients are included. The mean age was 61.1 years, the mean disease duration at time of inclusion 11.2 years, 67% were rheumatoid factor positive, 51% were anti-CCP positive. In figure 1 we show the association between DAS28 and the TOS in a linear model.

Currently there is no validated cut off point for the TOS (negative or positive score for inflammation). In our group of 100 patients the median TOS was 10, the most discriminating TOS was found to be 17 using chi-square test as depicted in table 1.

Abstract AB1170 – Table 1. Crosstab for total optical score of the handscan versus DAS28

DAS28	TOS<17	TOS≥17	Total	P-value
Mean	2.54	3.07	2.56	0.068
Std	0.90	1.72	1.12	
Median	2.55	3.13	2.61	
N	76 (4missings)	19 (1missing)	95 (5missings)

Abstract AB1170 – Figure 1

Conclusions: In this preliminary evaluation of the first 100 patients, we observed a limited positive correlation between the total optical score of the handscan and the DAS28. The TOS above 17 associates with moderate to severe disease activity. The definite clinical value of the handscan needs to be determined with longitudinal measurements and its predictive value versus the DAS28. The ongoing current registry aims to answer these questions.

REFERENCE:

- [1] Van Onna M, Ten Cate DF, Tsoi KL, et al. Assessment of disease activity in patients with rheumatoid arthritis using optical spectral transmission measurements, a non-invasive imaging technique. *Ann Rheum Dis* 2016;75:511–8. doi:10.1136/annrheumdis-2015-207315

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AB1171 **ULTRASOUND ASSESSMENT OF THE KNEE IN ELDERLY JAPANESE POPULATION**

A. Okahata¹, H. Ito¹, M. Furu¹, S. Kuriyama¹, S. Nakamura¹, M. Ishikawa¹, Y. Morita¹, M. Azukizawa¹, Y. Hamamoto¹, Y. Tanaka¹, Y. Tabara², F. Matsuda³, S. Matsuda¹. ¹Department of Orthopaedic Surgery, ²Department of Genome Informatics, ³Department of Human Disease Genomics, Kyoto University Graduate School of Medicine, Kyoto, Japan

Background: Osteoarthritis (OA) is known as degenerative arthritis. Knee OA is a common disease among aged population and one of the leading causes of disability. Many modalities are used to evaluate bony abnormalities and joint space narrowing for knee OA.

Ultrasound is one of the imaging modalities for evaluating knee joint structures such as cartilage, meniscus, osteophyte and synovium. There are few large-scale

studies focused on ultrasound findings of the knee of the elderly in general population.

Objectives: The aim of our study is to evaluate relationship between clinical and ultrasound findings of the elder population.

Methods: Two hundred and twenty two participants were recruited from Naga-hama residents aged 60 years or older. We evaluated the both knees of participants with ultrasound with a 5MHz transducer. Ultrasound scans were performed and assessed by a standardised protocol of the Outcome Measures in Rheumatoid Arthritis Clinical Trial Guidelines. The symptoms were clinically assessed by using Knee Society Score 2011 (KSS). We statistically examined whether the KSS (symptom) correlated with other clinical parameters and each ultrasonographical findings.

Results: Participants were 65 men and 137 women with a mean age of 67±5 years old. The mean body mass index (BMI) was 21.8±2.76 kg/m². The symptom subscale of KSS were significantly associated with age, BMI, knee maximum extension and flexion angle, suprapatellar effusion, medial meniscus protusion, medial recess synovial hypertrophy, and femoral and tibial medial osteophytes. Multiple regression analysis showed that medial osteophytes was most closely related to the symptom subscale of KSS among the ultrasound findings and demographic data evaluated.

Conclusions: The present study showed a strong association between the symptoms of the knee and the medial osteophytes in Japanese elder population.

REFERENCES:

- [1] Linaker CH, et al. *Clin Rheumatol* 1999.
- [2] S. Saarakkala, et al. *Osteoarthritis and Cartilage* 2012.
- [3] Schmidt WA, et al. *Ann Rheum Dis* 2004.
- [4] Wakefield RJ, et al. *J Rheumatol* 2005

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AB1172 **DOES ULTRASOUND-SCORED SYNOVITIS DEPEND ON THE PHARMACOKINETICS OF INTRAVENOUS INFLIXIMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS?**

A. Ishchenko¹, F.E. Lecouvet², P. Durez³, M.S. Stoeniu³. ¹Rheumatology, Cliniques Universitaires Saint-Luc; ²Radiology; ³Rheumatology, Cliniques Universitaires Saint-Luc, Institut de Recherche Expérimentale et Clinique (IREC), Brussels, Belgium

Background: Musculoskeletal ultrasound (US) was developed more than four decades ago and gradually made its way to daily rheumatological practice. This dynamic, non-irradiating and relatively inexpensive technique allows detection of synovitis/tenosynovitis as well as quantification of joint inflammation. However, several external factors, such as, joint position, machine settings, sonographer expertise and certain medications can influence the results of the US examination.

Objectives: The aim of this study was to investigate whether the pharmacokinetics of intravenous (i.v.) infliximab (IFX) influences the grade of US detected synovitis, measured by gray-scale (GS) and colour Doppler (CD) in rheumatoid arthritis (RA) patients.

Methods: Inclusion criteria were RA patients with at least one swollen joint, being treated with i.v. IFX, who had neither, changes in DMARD therapy nor local corticosteroid injections in the previous 3 months. Patients underwent clinical, laboratory and US assessment at three time points: at trough, peak plasma drug concentration and at mid-cycle. US assessments were performed blindly to the clinical and laboratory data. Twenty-four joints were assessed for the presence and grade (0–3) of GS synovitis and synovial CD signal: elbows, wrists, 2nd-5th metacarpophalangeal (MCP) joints, knees, ankles, 2nd-5th metatarsophalangeal (MTP) joints. A global OMERACT-EULAR synovitis score (GLOESS) as well as the sum of GS and CD scores were calculated for the 24-joint set, for the 12-joint set (Naredo score) and for wrists-MCP-ankles-MTP joints. Several disease activity scores (DAS) [28-joint DAS (DAS28-CRP), Simplified Disease Activity Index (SDAI)] and health assessment questionnaire (HAQ) were assessed in all patients. Trough plasma IFX concentrations were available in 20 patients.

Results: Twenty-two RA patients were prospectively recruited from the biologic therapy unit of our hospital. Two thirds of patients were female and mean age was 61 years. The majority of them had long-standing seropositive RA and over 90%