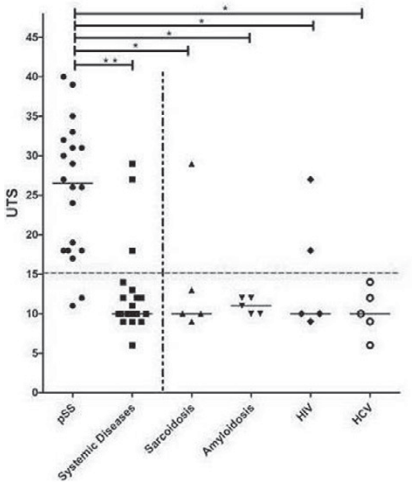
specificity of 85%, positive predictive value of 86%, negative predictive value of 89% and diagnostic odds ratio of 51. UTS was positive in 2 patients with HIV infection and one patient with sarcoidosis. Patients with pSS had significantly higher UTS than patients with systemic diseases (median UTS 27 vs. 10, $p<0.001$) and patients of the various subgroups ($p<0.05$; Fig).

Figure: UTS in patient (sub)groups. ** p<0.001, * p<0.05. Black horizontal lines indicate median values. The intermittent horizontal line shows the cut-off point. The intermittent black vertical line separates the two major patient groups (pSS vs. systemic diseases) from the subgroups of patients with sarcoidosis, amyloidosis, HIV and HCV infection.



Conclusions: This pilot study indicates that SGUS has a high diagnostic accuracy to discriminate pSS from associated systemic diseases with salivary gland involvement. A minority of HIV and sarcoidosis patients, however, may show SGUS findings mimicking pSS.

References:

[1] Jousse-Joulin et al. Rheumatology (Oxford) 2016;55:789–800.
[2] Delli et al. Oral Dis 2015;21:792–800.
[3] Hocevar et al. Rheumatology (Oxford) 2005;44:768–72.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3117

SAT0618 DISTURBANCES OF THE ACRAL PERFUSION DETECTED BY FLUORESCENCE OPTICAL IMAGING ARE ASSOCIATED WITH THE DEVELOPMENT OF ISCHEMIC COMPLICATIONS IN PATIENTS WITH SYSTEMIC SCLEROSIS

S. Lüders[1], S. Friedrich[1], S. Ohrndorf[1], S. Werner[1], G.-R. Burmester[1], G. Riemekasten[2], M. Backhaus[3]. *[1]Division of Rheumatology and Clinical Immunology, Charité - Universitätsmedizin Berlin, Berlin; [2]Department of Rheumatology, Universität zu Lübeck, Lübeck; [3]Department of Rheumatology, Park-Klinik Weißensee, Berlin, Germany*

Background: Systemic sclerosis (SSc) is a condition causing an impaired microcirculation with the risk of ischemic complications such as digital ulcers and pitting scars (DU/PS). Fluorescence optical imaging (FOI) is an imaging method that detects enhanced microcirculation as a sign of joint inflammation in both hands of patients with rheumatoid arthritis and other arthritides [1, 2]. FOI's impact to record disturbed microcirculation in the hands of patients with systemic sclerosis has not yet been sufficiently investigated.

Objectives: To find associations of disturbed microcirculation initially detected by FOI and the development of new DU/PS throughout a follow-up of 12 months.

Methods: Sixty-three patients with SSc were included and received FOI examination following the Xiralite-System guidelines (ICG 0.1mg/kg BW i.v.; 6 minute duration) as well as capillaroscopy at baseline. After a mean follow-up time of 12 months (min-max: 8–20 months), all participants were followed regarding the development of new ulcers and pitting scars.

Results: A disruption of microcirculation in FOI was defined as a lack of a sufficient fluorescent signal in at least one fingertip over the entire course of the examination and was found in 11 of 63 SSc patients. All patients had a history of DU/PS and frequently presented with a *late pattern* capillaroscopy (9 out of 11) at baseline. Fingers with a disrupted microcirculation also showed a reduced capillary density to a greater extend (96.0%) than fingers with a sufficient signal in FOI (76.0%; p=0.0241).

30 of 60 patients developed digital ulcers or pitting scars during follow up (3 drop outs due to death (n=2) or withdrawal). 81.8% of patients with a disturbed microcirculation in FOI developed these complications during follow-up compared with 42.9% of patients without a disruption in FOI (p=0.0419; OR=6.0 [95% CI 1.2 - 30.7]). A disruption of microcirculation especially increased the risk of developing DU/PS in the same finger: 20.1% of fingers with normal, but 65.4% with a missing FOI signal in the fingertip presented with an ischemic complication during follow-up ($p<0.0001$; OR=7.5 [95% CI 3.3 - 17.3]).

Conclusions: Fluorescence optical imaging can reveal an impaired microcirculation in patients with systemic sclerosis, which is associated with microangiopathic changes as seen in capillaroscopy as well as the subsequent development of digital ulcers and pitting scars. Therefore, FOI might help to identify patients at risk for these complications.

References:

[1] Werner SG et al. Inflammation assessment in patients with arthritis using a novel in vivo fluorescence optical imaging technology. Ann Rheum Dis. 2012 Apr;71(4):504–10.
[2] Werner SG et al. Indocyanine green-enhanced fluorescence optical imaging in patients with early and very early arthritis: a comparative study with magnetic resonance imaging. Arthritis Rheum. 2013 Dec;65(12):3036–44.

Acknowledgements:.
We thank Gabriela Schmittat for technical and Dr. Bernd Schicke, PhD, for statistical assistance.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4346

SAT0619 ANKLE EVALUATION IN ACTIVE RHEUMATOID ARTHRITIS BY ULTRASOUND: A CROSS SECTIONAL STUDY

A.M. Elsaman[1], E.S. Mostafa[2], A.R. Radwan[1]. *[1]Rheumatology, Sohag University Faculty of Medicine; [2]Rheumatology, Qena faculty of medicine, Sohag, Egypt*

Background: Ankle joint evaluation is underestimated in many clinical and sonographic scores used for evaluation and follow-up of rheumatoid arthritis (RA) patients. Moreover, sonographic scores which included the ankle joint had no agreement on examination parameters. More effort is needed to detect the value of the ankle joint examination in RA and also a description of the earliest and the most frequent ultrasonographic signs that should be considered in ankle assessment (1).

Objectives: detection of ankle affection by ultrasound (US) in active RA and correlate this finding with disease duration, DAS28-ESR 28 score and rheumatoid factor (RF).

Methods: 126 ankle joints and tendons of 63 active RA patients, aged above 18 years old were included in the study. US examination was done to the tibiotalar and talonavicular joints for synovitis and/or effusion on Greyscale (GS) mode and power doppler (PD). The anterior, lateral and posterior ankle tendons were examined for tenosynovitis and tendinosis.

Results: The mean age and ± standard deviation were 35.1±8.3 with the female-to-male ratio 2:1. The mean disease duration was 22.7±9.6 months. The mean DAS28-ESR 28 score was 3.05±0.66. The most frequent pathologies detected were tenosynovitis of the flexor, extensor or peroneal tendons (found in 30.2% of the affected ankles); followed by synovitis of the tibiotalar and talonavicular joints (18.3%); next was erosion (8.7%) and lastly tendinosis (4%). The earliest sonographic signs were tenosynovitis, followed by synovitis, erosion, and lastly tendinosis.

Conclusions: It can be stated that ankle evaluation should be considered more in RA assessment. The tibialis anterior and posterior tendons, the tibiotalar and talonavicular joints were the commonest and most frequent sites to be involved in the ankle. Tenosynovitis appears earlier than synovitis. DAS28-ESR score was correlated to synovitis and tenosynovitis but not to erosion. Bilaterality and erosion were correlated with disease duration. RF positivity has a positive correlation with positive US findings in the ankle region.

References:

[1] Alsuwaidi M, Ehrenstein BP, Fleck M, Hartung W: Ankle Joint Involvement In Rheumatoid Arthritis. An Ultrasound Study Using High Resolution-and Colour Doppler Ultrasound. In: *Arthritis and Rheumatism: 2013*: Wiley-Blackwell.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4957

SAT0620 POTENTIAL ROLE OF METACARPOPHALANGEAL JOINTS ULTRASOUND IN THE DIFFERENTIAL DIAGNOSIS BETWEEN EARLY RHEUMATOID ARTHRITIS AND EARLY SPONDYLOARTHRITIS

A. Batticciotto, G. Prato, M. Antivalle, M.C. Ditto, M.C. Gerardi, R. Talotta, F. Atzeni, P. Sarzi-Puttini. *Rheumatology Department, ASST-Fatebenefratelli–Sacco."L. Sacco" University Hospital, Milan, Italy*

Background: Several studies have demonstrated that musculoskeletal ultrasound (MSUS) is more sensitive in diagnosing arthritis when compared to clinical examination, although, as underlined in a recent review, still remains controversial whether it can improve substantial discriminatory value in an early arthritis (EA) setting.(1) In 2011 Gutierrez M. et al. published preliminary data on high frequency of peritenon extensor tendon inflammation in Psoriatic arthritis (PsA) patients, suggesting a relevant potential role for US in differential diagnosis between Rheumatoid Arthritis (RA) and PsA at metacarpophalangeal (MCP) joints level and recommending additional research in order to confirm these data.(2)

Objectives: To compare MSUS findings between early RA and early Spondyloarthritis (SpA) patients at MCP joints level.

Methods: From a consenting cohort of EA patients presenting to our Rheuma-