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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4490

AB0998 DIAGNOSTIC VALUE OF 14-3-3 (ETA) IN RHEUMATOID ARTHRITIS

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Background: Protein 14-3-3 η (eta) involved in the upregulation of inflammatory and joint damage factors [1]. 14-3-3 η is the candidate biomarker of rheumatoid arthritis (RA) [2].

Objectives: To evaluate the clinical utility of 14-3-3 η for diagnosis of RA.

Methods: We studied 44 patients (pts) with RA, 5 men and 39 women, median (25–75 percentile) of age 45 (33–59) years; disease duration is 10 (5–20) months, DAS28 5.2 (4.4–6.2); 5 pts with systemic lupus erythematosus, 4 – ankylosing spondylitis, 5 – OVERLAP, 4 with psoriatic arthritis and 20 healthy individuals. 14-3-3 η , anti-cyclic citrullinated peptide autoantibody (anti-CCP) was measured in serum by commercial enzyme-linked immunosorbent assays, IgM rheumatoid factor (IgM RF) measured – by immunonephelometry.

Results: The diagnostic sensitivity of 14-3-3 η for RA (cut off 0.19 ng/ml) is 70.5%, specificity – 83.7%; positive likelihood ratio – 4.33, negative likelihood ratio – 0.35; positive predictive value – 81.6%, negative predictive value – 73.5%; AUC – 0.78 (CI 0.68–0.88). Concomitant presence of 14-3-3 η and IgM RF, anti-CCP was determined in 68%, 73% of the patients with RA respectively. 14-3-3 η had correlation with IgM RF ($r=0.7$, $p<0.05$).

Conclusions: Serum 14-3-3 η are helpful for the diagnosis of RA.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3997

AB0999 FINNISH COHORT OF PATIENTS WITH RAYNAUD'S PHENOMENON-NAIFOLD VIDEOCAPILLAROSCOPY FINDINGS AND AUTOANTIBODY VALUES

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Background: Raynaud's phenomenon (RP) is very common all around the world, especially in cold climates (from 3 to 22%) (1). Nailfold capillaroscopy and autoantibodies have a pivotal role in diagnosing of different diseases in the context of RP (2). This is a first study of patients with RP in Finnish tertiary care hospitals.

Objectives: Aim is to investigate nailfold videocapillaroscopy (NVC) findings and autoantibody-values in patients with Raynaud's phenomenon first time in Finnish prospective multicenter study cohort.

Methods: We enrolled consecutive 160 patients with Raynaud's phenomenon who underwent NVC 9/2012–4/2013. Nailfold capillaries of II-V fingers of both hands were examined by using an optical probe videocapillaroscope mounted with x200 magnification lens. Images were analyzed with Videocapt software (DS Medigroup, Milan, Italy). NVC findings were classified with qualitative scoring, and early, active and late patterns were classified as "scleroderma pattern". Serum levels of antinuclear antibodies (ANA), antitopoisomerase I antibodies (anti-Scl-70) and anticentromere antibodies (ACA) were analyzed. Clinical and epidemiological features were reviewed.

Results: The mean age of the patients was 50, 4 years (± 14 , 8 SD), range 19–81 years, and 79, 4% were female. 15, 6% of patients were smokers and 3 had diabetes. Reasons for performing of NVC can be divided into three categories: (i) assessment of disease activity in previously diagnosed scleroderma ($n=26$), (ii) differential diagnosis of Raynaud's phenomenon ($n=98$), and (iii) assessment of Raynaud's phenomenon in other rheumatic diseases ($n=36$).

In group ii mean age was 48, 6 years (± 14 , 6 SD), 77, 6% were female and 17,3% were smokers. In this group 26, 5% ($n=26$) were diagnosed with scleroderma or there was strong suspicion of scleroderma at the first consultation of this study, 52% ($n=51$) were diagnosed with primary Raynaud's phenomenon and 21, 5% ($n=21$) were diagnosed with some other rheumatic disease (MCTD ($n=2$), Sjögren's syndrome ($n=3$), SLE ($n=4$), UCTD ($n=8$) and rheumatic arthritis ($n=4$)). Among those patients who was diagnosed with scleroderma, only 4% ($n=1$) had normal NVC pattern, 76,0% had scleroderma pattern ($n=19$) and 20,0% ($n=5$) had other non-specific changes. 19,2% ($n=5$) had low titers of ANA, 7,7% ($n=2$) had

medium titers of ANA and 76,0% ($n=19$) had high titers of ANA. 69, 2% ($n=18$) had anticentromere antibodies (ACA) and 3, 8% ($n=1$) had antitopoisomerase I antibodies (anti-Scl-70). Those patients who had positive ACA or anti-Scl-70 also had a NVC scleroderma-pattern.

Conclusions: The main reason for NVC in this cohort was differential diagnosis of Raynaud's phenomenon, and in most patients in diagnostic group primary Raynaud's phenomenon was diagnosed. NVC is useful method for differential diagnosis of Raynaud's phenomenon.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1431

AB1000 EVALUATION OF NEUROPATHIC FOOT AND ANKLE PAIN IN RHEUMATOID ARTHRITIS PATIENTS: ELECTROPHYSIOLOGICAL AND ULTRASOUND STUDIES

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Background: The majority of rheumatoid arthritis (RA) patients develop symptoms related to their foot or ankle.¹ Extraarticular manifestations occur in 10–20% of patients. Symptoms of neuropathy may be overlooked or overestimated in case of severe joint disease, restriction, pain and deformities.²

Objectives: This study aimed to evaluate neuropathic foot and ankle pain in RA patients using electrophysiology and musculoskeletal ultrasound (MSUS) to address the association between these findings and disease activity.

Methods: Fifty patients fulfilling the 2010 ACR/EULAR classification criteria and having neuropathic foot and/or ankle pain, were recruited. According to DAS28 system, patients were divided into two equal groups (25 patients each); active and remission. Twenty five healthy subjects were included as controls. Routine tibial and peroneal nerve conduction studies, as well as electromyography of tibialis anterior and abductor hallucis muscles, were performed.^{3,4} MSUS assessment of the ankle joint and extra-articular portion of the foot was also performed.⁵

Results: Thirty nine (78%) patients showed the electrophysiological findings of foot neuropathy, irrespective of the disease activity level. In total, 48% of the patients had demyelinating mononeuropathies (entrapment neuropathies), whereas the other 30% had symmetrical axonal neuropathies (Table 1).

Table 1. Electrophysiological Findings ($n=50$)

	N (%)
Posterior tibial entrapment at ankle	10 (20%)
Peroneal entrapment at fibular neck	6 (12%)
Combined entrapments of posterior tibial nerve at ankle & peroneal nerve at fibular neck	8 (16%)
Pure sensory axonal neuropathy	12 (24%)
Sensorimotor axonal neuropathy	3 (6%)

Ultrasound diagnosis of posterior tibial entrapment at the ankle was encountered in 20 (40%) patients. In addition, a positive power Doppler (PD) signal and

Figure (1): Distribution of power Doppler signals and erosions among patients ($n=50$)

erosions of the ankle joint were prevalent among the active group in comparison with patients in remission ($p < 0.001$), as shown in figure (1).

Conclusions: Peripheral nerve affection is common in the rheumatoid foot, irrespective of the disease activity level. The most common foot neuropathies are: posterior tibial entrapment at the ankle, peroneal entrapment at the fibular neck and pure sensory axonal neuropathy. MSUS is valuable for diagnosis of posterior tibial entrapment at the ankle. In addition, a positive PD signal and erosions of the ankle joint are associated with disease activity.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1984

AB1001 CLINICAL VERSUS ULTRASOUND EVALUATION OF PERIPHERAL ENTESITES IN A COHORT OF SPONDYLOARTHRITIS

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Objectives: Clinical versus ultrasound evaluation of peripheral enthesites in a cohort of spondyloarthritis

Methods: A monocenter prospective study of all SpAs ≥ 18 years meting the ASAS criteria for SpA followed in a rheumatology center over a period from January 2015 to April 2016. Demographic, clinical, lab and ultrasound characteristics were noted. Fifteen entheses sites were investigated bilaterally: insertions of supra-spinatus, sub-scapular, medial and lateral epicondylar tendons, triceps brachialis, gluteus medius, quadriceps proximal and distal insertion (patellar ligament, medial and lateral collateral ligament), Achilles tendon, plantar aponeurosis. These sites were assessed clinically and with US during the same visit and then results were compared between the clinical and the US examination.

Results: A total of 208 patients were included, mainly men (63.5%). The mean age was 40.2 ± 11.7 years and the mean duration of the SpA was 11.8 ± 8.7 years. Axial radiographic SpA was the most frequent phenotype (69.2%) and ankylosing spondylarthritis was the most frequent sub-group (57.7%). At examination, 88.9% had an active disease (ASDAS-ESR and/or ASDAS-CRP > 1.3) and 64.4% of SpAs were taking NSAID. Clinical examination and US revealed at least one abnormal enthesitis in 55.3% and 86.1%, respectively. Overall, 6240 entheses were examined, 44.2% were considered abnormal by clinical examination and 83.2% by US. The US abnormalities were entesophytes (69.5%), erosions (54.8%), hypoechoogenicity (49%), thickening (46.4%), bursitis (30.5%), calcifications (20.9%) and finally Doppler signal near the cortical bone in 20% of the examined entheses. The evidence of enthesitis abnormalities by clinical examination has a poor likelihood ratio (LR) for the presence of any US abnormality (LR $+ = 1.4$, LR $- = 0.8$), for the acute US abnormalities (LR $+ = 1.25$, LR $- = 0.8$), for the chronic US abnormalities (LR $+ = 1.3$, LR $- = 0.8$) as well as for the presence of the Doppler signal (LR $+ = 1.1$, LR $- = 0.9$) at all sites.

Conclusions: US is useful to detect structural and inflammatory abnormalities of the enthesitis in the SpA and can complete physical examination in order to better evaluate entesitis.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1978

AB1002 CLINICAL AND ULTRASOUND PREVALENCE OF PERIPHERAL ENTESITIS IN AN ALGERIAN COHORT OF SPONDYLOARTHRITIS

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Background: Algerian Spondyloarthritis (SpA) is characterized by a high prevalence and more severe axial and articular lesions compared to the caucasian population. What about entesitis involvement?

Objectives: To estimate the global and site-specific clinical and ultrasound prevalence of peripheral entesitis in an Algerian cohort of SpA

Methods: AA monocenter prospective study of all SpA ≥ 18 years meting the ASA criteria for SpA followed in a rheumatology center at EHS Ben Aknoun over a period from January 2015 to April 2016 Demographic, clinical, lab and ultrasound characteristics were noted. Fifteen entheses sites were investigated: insertions of supra-spinatus, sub-scapular, medial and lateral epicondylar tendons,

triceps brachialis, gluteus medius, quadriceps proximal and distal insertion (patellar ligament, medial and lateral collateral ligament), Achilles tendon, plantar aponeurosis. These sites were assessed clinically and ultrasonographically during the same consultation to determine the global and site-specific clinical and ultrasound prevalence of peripheral entesitis. Elementary ultrasonographic lesions were noted. The comparison between clinical and ultrasound prevalence was performed using the Mac Nemar test using the SPSS software.

Results: A total of 208 patients were included, mainly men (63.5%). The mean age was 40.2 ± 11.7 years. The mean duration of the SpA was 11.8 ± 8.7 years. Axial radiographic SpA was the most frequent phenotype (69.2%) and ankylosing spondylarthritis was the most frequent sub-group (57.7%). At examination, 88.9% had an active disease (ASDAS-vs and/or ASDAS-crp > 1.3) and 64.4% of SpAs were taking NSAID 6240 entheses were assessed clinically and 7072 entheses examined with ultrasound

Table 1. The global and site-specific clinical and ultrasound prevalence of peripheral entesitis

	Clinical%	Ultrasound%	P
Calcaneal tendon	13,9	68,8	<0,001
Quadriceptal	9,9	49	<0,001
Supra Spinatus	17,8	45,7	<0,001
Gluteus Medius	11,3	34,6	<0,001
Patellar Inf	8,9	32,5	<0,001
Plantar Aponeurosis	14,7	32,2	<0,001
Triceps Brachialis	10,3	26,7	<0,001
Lateral Epicondylar	23,8	24,5	NS
Infra Spinatus	–	24	–
Gluteal Minimus	–	22,6	–
Patellar Sup	10,6	14,9	NS
Sub Scapularis	18,5	5	<0,001
Medial Epicondylar	12,7	3,8	<0,001
Inf Collateral Lat Lig	6,5	2,6	0,009
Sup Collateral Lat Lig	5,8	1,9	0,007
Collateral Med Sup Lig	5,8	0,7	<0,001
Collateral Med Inf Lig	5	0,5	<0,001
All sites	44,2	83,2	<0,001

Figure 1 summarizes the prevalence of elementary ultrasound lesions per site.

Conclusions: In this cohort and as expected, ultrasound (with at least one elementary lesion) was superior to clinical examination for the detection of peripheral entesitis (83.2 vs. 44.2%, $P < 0.001$). Interesting sites to explore according to the prevalence and to the presence of a Doppler signal ($< 2\text{mm/cortical}$) would be insertions of the calcaneal, quadriceptal, patellar, gluteal, plantar aponeurosis and triceps brachialis tendons.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1572

AB1003 MEDIAN AND ULNAR NERVE CROSS-SECTIONAL AREA IN CARPAL TUNNEL SYNDROME WITH EXTRATERITORIAL SPREAD OF SENSORY SYMPTOMS

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Objectives: To evaluate the relationship between extramedian spreading of sensorial symptoms and median and ulnar nerve cross-sectional area in patient with carpal tunnel syndrome (CTS), to compare the ultrasonographic and electrophysiological findings in patients with CTS whose sensorial symptoms are extramedian spreading or median distribution only.

Methods: Patients with CTS were divided into two groups as with and without extramedian symptoms and were assessed clinically, electrophysiologically and ultrasonographically by three blind investigators. In electrophysiological tests, median and ulnar nerve conduction studies were performed. Nerve cross-sectional areas were measured at hamatum hook, pisiform bone, radio-ulnar joint, one-third distal part of forearm, and medial epicondyle for median nerve; radio-ulnar joint, pisiform bone, one-third distal part of forearm, and medial epicondyle for ulnar nerve by ultrasonography.