DMARD for at least three months. Only anti-TNFs were used as a first line b-DMARD therefore secukinumab (Secu) was used after first line b-DMARD treatment. Adalimumab, certolizumab, etanercept, golimumab were grouped as subcutaneous (s.c) anti-TNFs. MDA was defined as meeting five out of seven criteria during follow-up [1]. **Results:** One hundred seventy-two patients (61% female) were included into the analysis. The mean follow-up time was 105.4±76 (6-444) months and the mean age was 50.2±13.3 (16-81) years. Mean age of onset for PsA was 38±11.9 (11-79) years; mean PsA and PsO duration were 140±90.7 (7.9-528) and 253±138 (0-756) months, respectively. Methotrexate was the most commonly used (88 %) cs-DMARD and biological DMARDs were used in 74 patients (43.3%).

Overall, 95 patients (55.2 %) were observed at MDA which was significantly lower in b-DMARD users compared to only cs-DMARD users (45.9 % vs 61.9 %; $p=0.038$, OR: 4.3). MDA did not differ according to PsA subtypes. The addition of cs-DMARD treatment to b-DMARDs did not affect MDA frequency. In univariate analysis; higher MDA frequency was associated with older age ($p=0.002$), longer PsO duration ($p=0.036$), late onset of PsA ($p=0.007$) and continuation of first b-DMARD (OR:13.9 $p<0.001$). In multivariate analysis, older age (OR:1.3;95 % CI:1.02-1.68), late onset PsA (OR:1.03; 95 % CI:1.01-1.067) and continuation of first b-DMARD (OR:46.8; 95 % CI:1.6-1371) were associated with MDA.

Conclusion: Although frequency of MDA in our cohort was consistent with previous reports, a significant number of patients could not achieve MDA. Frequency of MDA was found to be lower in b-DMARD users compared to cs-DMARD users, possibly resulted from initiation of b-DMARD in patients with higher disease activity. Higher MDA rate was associated with higher continuation rate at first line b-DMARD treatment (TNF-inhibitor) and decreased gradually after b-DMARD switches. Although combined use of cs-DMARD with b-DMARDs did not increase the frequency of MDA, it was associated with higher b-DMARD retention. MDA is a useful outcome measure in daily follow-up of PsA patients and the importance of reaching sustained MDA for prognosis should be investigated further.

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Table 1. b-DMARD responses, continuation rate and frequency of achieving MDA in patients with PsA

b-DMARD treatment	Mean (median) duration (month)	Continuation rate n, (%)	Primary inefficacy n, (%)	Secondary inefficacy n, (%)	MDA n, (%)
First line b-DMARD (n=74)	50.4 (36)	37 (50)	9 (24.3)	17 (46)	34 (45.9)
*s.c TNF inhibitors (n=62; 83.8 %)	50.8 (35.5)	32 (51.7)	8 (26.7)	9 (30)	31 (50)
Infliximab (n=12; 16.2 %)	13.8 (11)	3 (25)	1 (11.1)	7 (77.8)	3 (25)
Second line b-DMARD (n=29)	28.4 (13.5)	15 (51.7)	5 (35.7)	3 (21.4)	8 (27.6)
*s.c TNF inhibitors (n=22; 75.9 %)	28.6 (15)	11 (50)	4 (36.4)	2 (18.2)	5 (22.7)
Infliximab (n=5; 17.2 %)	35.2 (36)	3 (60)	-	-	2 (40)
Secukinumab (n=2; 6.9 %)	9 (9)	1 (50)	1 (50)	-	1 (50)

s.c:subcutaneous

Figure 1. Comparison of b-DMARD retention according to MDA status in patients with ongoing first line b-DMARD treatment Log rank: $p=0.001$

Disclosure of Interests: None declared

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POS0143

POST-STRESS ULTRASOUND ASSESSMENT OF THE ACHILLES TENDON IS USEFUL TO DIFFERENTIATE PSORIATIC ARTHRITIS FROM THE PHYSIOLOGICAL ADAPTATION TO EXERCISE

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Background: Achilles enthesitis is the most accessible psoriatic arthritis hallmark to assess through ultrasound scan. Recently it has been demonstrated that continuous mechanical stress such as experimented by runners can drive to the development of physiological morphological changes that resembles those observed in psoriatic arthritis. In a subject with the suspicious diagnostic of psoriatic arthritis who practice any sports associated to continuous impact over the heels, the challenge to determine in what extent the morphological changes are linked to the exercise or to the disease, is remarkable.

Objectives: To determine morphological differences between patients with psoriatic arthritis, trained runners and sedentary volunteers through ultrasound scan of the Achilles tendon.

Methods: An ultrasound scan of the Achilles tendon was performed to the following subjects: Patients with diagnosis of psoriatic arthritis with a DAPSA score of low activity in at least six months and with history of heel pain in the past, volunteers runners with not less of 3-year sport activity at least three times a week and sedentary volunteers. In the group of patients, ultrasound scan was performed over the feet with history of heel pain. In the case of volunteers, the ultrasound scan was performed in the dominant feet. The selection of volunteers was not randomly-based in order to match their age and sex to the patients as much as possible. Besides demographic features, a comparison between tendon thickness at the level of the calcaneus bone border and the height of the retrocalcaneus bursae in the longitudinal axis were performed through ANOVA test. Power Doppler signal was scanned in all subjects before and after a controlled mechanical stress of the Achilles tendon by climbing stairs (100 steps, two times).

Results: Female/male distribution of the group of patients, runners and sedentary people were: 12/10, 18/18 and 20/18, respectively. Achilles tendon mean thickness ± standard deviation was 6.61 ± 1.05, 5.91 ± 1.44 and 4.61 ± 2.1mm, respectively ($P=0.01$). Retrocalcaneus bursae height was 3.42 ± 0.21, 3.22 ± 0.27 and 2.21 ± 0.31 ($P=0.01$). Basal PD signal was present into the enthesitis of 2/22, 1/36 and 0/38, respectively (P not significant). After exercise, PD signal was present in 8/22, 5/36 and 0/38, respectively ($P<0.001$).

Conclusion: Power Doppler signal after exercise was identified as the most relevant ultrasound hallmark to distinguish a patient with psoriatic arthritis from a trained runner, even when psoriatic arthritis were considered as low activity. Post exercise ultrasound scan should be considered as a diagnosis tool in sportsmen with suspicious of psoriatic arthritis, until further studies confirm our findings.

Disclosure of Interests: None declared

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POS0144

NOVEL APPLICATION OF OPTICAL COHERENCE TOMOGRAPHY ANGIOGRAPHY AND NAILFOLD CAPILLAROSCOPY IN PSORIATIC ARTHRITIS - DIAGNOSTIC AND PROGNOSTIC ACCURACY IN RELATION TO PSORIASIS AND HAND OSTEOARTHRITIS

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Background: Nailfold video capillaroscopy (NVC) and angiographic optical coherence tomography (OCTA) have potential in diagnosing psoriatic arthritis (PsA) and differentiating it from psoriasis vulgaris (PsO) and hand osteoarthritis (OA).

Objectives: To assess the diagnostic properties of NVC and OCTA in patients with PsA compared to patients with PsO and hand OA based on nailfold capillary patterns.

Methods: Patients with distal interphalangeal-joint PsA and nail involvement (n=50), PsO with nail involvement (n=12); and OA (n=13) were included in this cross-sectional study. Capillaries were evaluated semi-quantitatively and qualitatively. Differences in capillary findings between groups were assessed using

mixed linear models. Binary logistic regression analyses were performed to determine the probability for PsA diagnosis based on capillaroscopy findings.

Results: Reduced capillary density and reduced nailfold blood flow in OCTA images distinguished PsA from both PsO ($p=0.004$ and $p=0.052$) and OA ($p=0.024$ and $p<0.001$). Qualitative analysis revealed that glomerular capillaries were found in only 3% of PsA patients but in 13% of PsO patients ($P=0.003$). Furthermore, coiled vessels were only seen in 55% of PsA patients and 71% in PsO patients ($P=0.043$). NVC microhaemorrhage was dominant in PsA patients (13 % and 17 %) and significantly different to OA patients ($p=0.05$). No capillary pattern was associated with an increased probability of the PsA diagnosis.

Conclusion: A pathognomic pattern for PsA diagnosis was not identified, however we demonstrated characteristics significant capillaroscopy findings for PsA such as decreased capillary density, reduced blood flow, and less coiled vessels in OCTA and presence of NVC microhemorrhages.

Table 1.

	NVC-rating	PsA (n=188)	PsO (n=42)	OA (n=48)	PsA vs PsO	PsA vs OA
NVC ad modum Cutolo	Reduced capillary density	51 %	31 %	51 %	$P=0.107$	0.770
	Irregularly enlarged capillaries	22 %	33 %	25 %	$P=0.082$	$P=0.988$
	Giant capillary	2 %	0	0	$P=0.400$	$P=0.375$
	Microhaemorrhages	13 %	7 %	2 %	$P=0.327$	$P=0.05$
	Capillary ramifications	14 %	24 %	29 %	$P=0.054$	$P=0.307$
	Capillary disorganisation	45 %	57 %	48 %	$P=0.170$	$P=0.685$
	OCTA-rating	PsA n=193	PsO n=48	OA n=52	PsA vs PsO	PsA vs OA
OCTA ad modum Cutolo	Reduced capillary density	53 %	21 %	33 %	$P=0.004$	$P=0.024$
	Irregularly enlarged capillaries	34 %	56 %	19 %	$p=0.015$	$P=0.178$
	Giant capillary	0	0	0	-	-
	Microhaemorrhages	0	0	0	-	-
	Capillary ramifications	0	0	0	-	-
	Capillary disorganisation	55 %	46 %	49 %	$P=0.209$	0.723
	Nail thickness*, mm., mean (SD)	0.62 (0.13)	0.73 (0.39)	0.59 (0.08)	$p=0.876$	$P=0.020$
OCT	OCTA blood flow percentage, mean (SD)	6.00 (2.94)	6.94 (3.08)	7.88 (3.30)	$P=0.052$	$P<0.001$
	Capillary morphology	PsA n=192	PsO n=48	OA n=52	PsA vs PsO	PsA vs OA
	Tortuous/Coiled capillaries	55 %	71 %	56 %	$P=0.043$	$P=0.890$
	Enlarged capillary diameter	17 %	21 %	17 %	$P=0.557$	$P=0.984$
Qualitative evaluation of NVC morphology	Ramified capillaries	13 %	15 %	19 %	$P=0.701$	$P=0.215$
	Microhaemorrhages	17 %	6 %	8 %	$P=0.068$	$P=0.106$
	Elongated capillaries	6 %	4 %	4 %	$P=0.669$	$P=0.592$
	Different capillary shapes, glomerular	3 %	13 %	2 %	$P=0.003$	$P=0.779$

The distribution of NVC and OCTA capillary morphology between PsA, PsO and OA, and qualitative evaluation of NVC morphology. Data are presented as percentage of capillary findings within the group. Differences between PsA and the other groups are presented as p-values. PsA: psoriatic arthritis, PsO: psoriasis vulgaris, OA: hand osteoarthritis, NVC nailfold video capillaroscopy, OCTA: angiographic optical coherence tomography. *: 1 patient (PsO group) was excluded from the analysis because of nail thickness>2.0mm exceeding the maximum penetration depth of the OCT laser, representing an outlier.

with psoriatic arthritis, psoriasis, and hand osteoarthritis. *: nail plate. #: proximal nailfold. §: one-millimetre field.

Figure 1. Optical coherence tomography angiography of the nail and nailbed blood vessels in patients with psoriatic arthritis, psoriasis, and hand osteoarthritis. *: nail plate. #: proximal nailfold. §: one-millimetre field.

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POS0145

PREDICTORS OF PSORIATIC ARTHRITIS DEVELOPMENT IN PSORIASIS PATIENTS: A SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS

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