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THU0328 MIR-499 POLYMORPHISM IS ASSOCIATED WITH SUSCEPTIBILITY TO PSORIATIC ARTHRITIS – PRELIMINARY STUDY

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Background: Polymorphism within the miR-499 has been reported to be associated with susceptibility to rheumatoid arthritis (RA) in various populations.

Objectives: Our study aimed to find out whether similar association could be observed also in Polish population in both RA and psoriatic arthritis (PsA) patients.

Methods: For this purpose 359 individuals were studied, including 111 RA patients, 86 patients with PsA and 162 healthy blood donors that served as a control group.

Genotyping for miR-499 rs3746444 T/C was performed using a LightSNIP assay.

Results: Distribution of the miRNA-499 alleles and genotypes was similar in RA patients and controls. Among RA patients those carrying the CC homozygous genotype presented with lower DAS28 at diagnosis (0.027) but higher CRP levels after 12 weeks of anti-TNF treatment ($p=0.042$).

Interestingly, the TT genotype (rs3746444) was overexpressed in patients with PsA as compared to controls (OR=1.85, $p=0.034$) but its frequency was not significantly different when compared to RA cases. This polymorphism was also not found to be associated with clinical parameters in PsA patients.

Conclusions: These results show that miR-499 rs3746444 T/C polymorphism may constitute a risk factor for psoriatic arthritis development.

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THU0329 AN ITALIAN OBSERVATIONAL PROSPECTIVE STUDY ON PREDICTORS OF CLINICAL RESPONSE TO GOLIMUMAB AT 6 MONTHS IN PATIENTS WITH ACTIVE PSORIATIC ARTHRITIS

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Background: The identification of markers of response to biologic agents in the treatment of active psoriatic arthritis (PsA) may help in predicting the outcome and hence in optimising therapy.

Objectives: To evaluate the ability of a panel of candidate factors to predict the clinical response, defined as the achievement of minimal disease activity (MDA) following 6 month therapy with golimumab.

Methods: This Italian 6 month observational study included 149 PsA patients (53.7% males, mean age 49 years (SD 11) inadequate responders to conventional therapies who started the anti-tumour necrosis factor- α golimumab. Estimated factors included demographic data and baseline characteristics of the disease, measures of disease activity and functional disability, and biomarkers.

Results: At 6 months, a high rate of treatment persistency (80%) was observed. MDA was achieved in 44.3% of patients. Multivariate analysis showed Disease Activity in Psoriatic Arthritis (DAPSA) score, high-sensitivity C-reactive protein (hs-CRP), age, and disease duration as baseline factors correlating with MDA achievement at 6 months (table 1). A higher hs-CRP value and the absence of comorbidities were predictive factors for MDA at 6 months in biomarker-enhanced prediction models.

Golimumab was effective in improving disease and functional parameters and was well tolerated.

Conclusions: The availability of predictive factors of treatment response identified in this study may be helpful in driving the selection of PsA patients that are most likely to benefit of the therapy with golimumab.

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THU0330 OBESITY IN PSORIATIC ARTHRITIS: COMPARATIVE PREVALENCE WITH SKIN PSORIASIS AND ASSOCIATED FACTORS

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Background: Obesity (BMI ≥ 30 kg/m²) is a common cardiovascular risk factor in psoriatic disease¹. Although the prevalence of obesity is high, the factors associated with it in psoriatic arthritis (PsA) are poorly understood.

Objectives: We aimed to evaluate the prevalence and obesity-associated factors in patients with PsA.

Methods: Retrospective cross-sectional study that included 205 consecutive patients with PsA according to CASPAR criteria. The prevalence of obesity was compared with that of 310 patients with skin psoriasis of similar age (± 3 years). The factors associated with obesity were first analysed by a conditional logistic regression. The significant factors in this first model were then introduced in a multivariate model using a backward step approach (p -values < 0.05 were considered significant).

Results: One-hundred twelve men and 94 women were included, with a mean age of 53 ± 13 years. Obesity was more prevalent among psoriatics (36.5%) compared to PsA patients (24%), OR 1.6 (1.1–2.3), $p < 0.05$. The factors associated with obesity in the univariate analysis ($p < 0.05$) were: onset of psoriasis > 40 years (OR 2.4), onset of arthritis > 40 years (OR 2.1), PsA family history (OR 3.1), polyarticular presentation (OR 1.9), axial presentation (OR 2.5), polyarticular evolution (OR 2.4), axial evolution (OR 4.2), diabetes (OR 3.6), HBP (OR 3.9), and dyslipidemia (OR 3.5). After correcting for age, sex, disease duration and other confounders, independent associations with obesity found in the multivariate model ($p < 0.05$) were: PsA family history (OR 3.6, IC95%: 1.1–14.4), axial evolution (OR 4.4, IC95%: 1.0–22.4) and dyslipidemia (OR 3.5, IC95%: 1.5–8.6).

Used model	Parameter	Item considered	Odd Ratio	95% confidence interval	P value
Univariate logistic model (ULM)	Gender	Female	0.3197	0.1531–0.6677	0.0024
	Age	Continuous	0.9570	0.9252–0.9899	0.0109
	Baseline DAPSA score	Continuous	0.9287	0.8967–0.9618	<0.0001
	Baseline HAQ total score	Continuous	0.2937	0.1423–0.6063	0.0009
	Baseline Pain	Continuous	0.9833	0.9684–0.9984	0.0299
	Baseline BASDAI	Continuous	0.7036	0.5733–0.8635	0.0008
	Comorbidities	Presence	0.3258	0.1465–0.7241	0.0059
Multivariate logistic model (MLM)	Age	Continuous	0.9542	0.9112–0.9993	0.0465
	Baseline hs-CRP	Continuous	1.0015	1.0002–1.0028	0.0241
	Baseline DAPSA score	Continuous	0.9255	0.8879–0.9647	0.0003
	Disease duration	Continuous	1.0057	1.0007–1.0107	0.0260
	Baseline hs-CRP	Continuous	1.0688	1.008–1.1334	0.0261
Biomarker-enhanced ULM	Comorbidities	Presence	0.2645	0.0881–0.7941	0.0177
Biomarker-enhanced MLM	Baseline DAPSA score	Continuous	0.9231	0.8850–0.9628	0.0002

Conclusions: Obesity was more common among our patients with cutaneous psoriasis than in those with arthritis. The model that best explains obesity in this PsA series combines genetic factors (PsA family history), together with factors specific to the metabolic syndrome (dyslipidemia), with others owned to arthritis (axial evolution).

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THU0331

RELATIONSHIP BETWEEN THE NAIL ULTRASONOGRAPHIC EVALUATIONS AND CLINICAL FEATURES IN PATIENTS WITH PSORIATIC ARTHRITIS

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Background: Nail ultrasonography (US) is a favourable visualisation method to evaluate the subunits of the nail. Little is known about the relation between the properties of nail structures and the clinical characteristics of patients with psoriatic arthritis (PsA).¹

Objectives: To show the relationship between the clinical features and ultrasonographic evaluations of the nail in patients with PsA.

Methods: Patients with PsA according to the CASPAR criteria were recruited into the study. All of the hand nails and toenails were examined by grayscale and power Doppler techniques. The relations between the characteristics of the patients and the sonographic findings of the nail structures were assessed. Concerning to patient characteristics, subtypes of PsA, gender, age, height, BMI, working status, smoking, PsA duration, psoriasis duration, history of dactylitis, history of uveitis, number of tender and swollen joints, Maastricht Ankylosing Spondylitis Enthesitis Score, CRP, disease activity, haemoglobin, sacroiliitis, inspectional nail involvement (INI), Nail Psoriasis Severity Index (NAPSI), PASI, HAQ, quality of life, and the biologic treatment were recorded. The nail plate thickness (NPT), number of nails with trilaminar irregularity (NTI), nail bed thickness (NBT), and the doppler activity score (DAS) were recorded as the sonographic nail findings. The Kruskal Wallis analysis, Spearman's correlation, and Man Whitney U tests were used in statistical analysis. $p < 0.05$ was accepted as significant.

Results: 63 patients (756 nails) were evaluated. Among the PsA subtypes, 38% of patients were asymmetrical oligoarticular arthritis, 38% were symmetrical polyarthritis, 7.9% distal interphalangeal arthropathy, and 15.8% predominant spondylitis. All of the ultrasonographic nail parameters were independent of the PsA subtypes ($p > 0.05$). The mean of NPT was higher in males and correlated with age, height, and the haemoglobin levels. The NTI score was higher in patients with INI and correlated with the NAPSI score. The mean of NBT was only correlated with the haemoglobin levels. The DAS was higher in workers and correlated with age and the NAPSI score. The other clinical parameters were not associated with the sonographic findings.

Abstract THU0331 – Table 1. Relationships between the patients' characteristics and the ultrasonographic parameters*

US nail parameters	Gender	Worker	INI	Age	Height	NAPSI	Hemoglobin
NPT (mm)	$p=0.002$			$p=0.001$ rho:0.396	$p=0.021$ rho:0.290		$p=0.021$ rho:0.292
NTI (0-12)			$p<0.0001$			$p<0.0001$ rho:0.668	
NBT (mm)							$p=0.012$ rho:0.316
DAS (0-48)		$p=0.042$		$p=0.001$ rho:-0.407		$p=0.006$ rho:0.344	

(US: ultrasonography, INI: inspectional nail involvement, NAPSI: nail psoriasis severity index, NPT: nail plate thickness, NTI: nails with trilaminar irregularity, NBT: nail bed thickness, DAS: doppler activity score. *Only parameters which have statistical significant relations by Mann Whitney U test and Spearman's correlation).

Conclusions: The ultrasonographic findings of the nail structures were determined in PsA. These findings did not differ among the subtypes of the disease. Although the sonographic nail findings were not associated with the most of the clinical parameters; they had significant relations with some demographics, inspectional nail involvements, and haemoglobin levels in PsA.

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THU0332

FATIGUE REMAINS A DOMINANT SYMPTOM DESPITE TUMOUR NECROSIS FACTOR INHIBITOR THERAPY IN PSORIATIC ARTHRITIS: A POPULATION-BASED COHORT STUDY

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Background: Psoriatic arthritis (PsA) is a chronic inflammatory disorder associated with fatigue, pain and impaired function. Tumour necrosis factor inhibitor (TNFi) therapy fails among half of patients with PsA treated in routine care.

Objectives: The objective of this population-based cohort study was to investigate the association of fatigue with disease activity and adherence to therapy in PsA patients receiving their first TNFi.

Methods: Data on patient characteristics, disease activity and treatment adherence were obtained from the DANBIO register. Information on comorbidities according to the Charlson Comorbidity Index (CCI) and psychiatric comorbidities was obtained through linkage with the Danish National Patient Register. We performed Kaplan-Meier plots and univariate Cox proportional hazard regression analysis. Percentages of patients achieving relevant clinical responses were calculated.

Results: From 2006 thru 2016, we identified 880 patients eligible for analyses. Patients with upper median fatigue scores had statistically significantly higher disease activity measures, higher pain and HAQ scores, more comorbidities and current smoking status at baseline compared with patients with lower median fatigue scores (table 1). After treatment initiation the mean VAS fatigue score decreased from 62 mm (SD 25) to 44 mm (SD 30) at six months ($p < 0.001$). Kaplan-Meier curves showed shorter adherence to treatment in patients with higher baseline fatigue scores compared with patients with lower fatigue scores (HR 1.43 [1.2 to 1.7], $p < 0.001$) (figure 1). ACR20, 50 and 70 responses at six months were 49%, 35% and 18% respectively. VASfatigue20, 50 and 70 responses were 57%, 39% and 20%, respectively. The kappa value between ACR20, 50, 70 and VASfatigue responses were 0.37, 0.40 and 0.48 ($p < 0.001$), respectively.

Abstract THU0332 – Table 1. Baseline characteristics according to median fatigue stratification

	Lower median VAS fatigue (n=430)	Upper median VAS fatigue (n=450)	p value
Age, years	47.8 (39.4–57.3)	49.0 (40.0–56.1)	$p=0.905$
Male gender	51%	40%	$p<0.001$
DAS28-CRP (0–10)	4.0 (3.2–3.7)	4.8 (3.9–5.5)	$p<0.001$
HAQ score (0–3)	0.75 (0.38–1.13)	1.38 (0.88–1.75)	$p<0.001$
VAS patient pain (0–100)	45 (29–62)	74 (63–84)	$p<0.001$
BMI	26.8 (23.7–30.7)	27.7 (24.3–31.2)	$p=0.118$
Current smoking	28%	36%	$p=0.034$
Comorbidities (%)	66%	61%	$p=0.049$
CCI=0	27%	27%	
CCI=1	7%	12%	
CCI≥2			
Depression treated in hospital, n (%)	18 (4.2)	31 (6.8)	$p=0.105$

Values are the mean and SD except where stated otherwise. Comparisons were assessed by χ^2 /Mann-Whitney test. Lower median fatigue <64 mm, higher median fatigue ≥64 mm