AB0776 THE EFFECT OF PREGNANCY ON DISEASE ACTIVITY OUTCOMES IN PSORIATIC ARTHRITIS PATIENTS

M. Berman¹, D. Paran¹, D. Zisman², J. Wollman¹, D. Levartovsky¹, O. Elkayam¹. ¹Rheumatology, Tel Aviv Sourasky Medical Center, Tel Aviv; ²Rheumatology, Carmel Medical Center, Haifa, Israel

Background: Psoriatic arthritis often affects patients at a childbearing age. The relationship between pregnancy and psoriatic arthritis, in terms of pregnancy outcomes and its effect on disease activity, has not been well studied

Objectives: To evaluate the effect of pregnancy on disease activity in psoriatic arthritis

Methods: A retrospective review of files of female patients followed at Psoriatic arthritis clinic at the Tel Aviv Medical center was performed, patients with at least 1 pregnancy during follow up and one visit during or soon after pregnancy were included. A review of files was performed which included the following data: age, disease duration, pattern of PsA, disease activity before during and after pregnancy, record of treatment, including IA injections. Postpartum period was defined as up to 1 year after pregnancy. PsA activity was defined as follow: no disease activity (no active synovitis), mild disease (up to 1 joint involved), moderate to severe disease (more than 2 joints involved). The follow-up during and after pregnancy was classified as: improvement, worsening or stable

Results: 25 PsA women and 35 pregnancies were identified. 33 resulted in live healthy babies. One pregnancy was interrupted on week 23, so partial follow up was available. The mean age at pregnancy was 32.5 years. Table 1 summarizes status of disease activity before, throughout pregnancy and during the postpartum period in the whole group. No significant change in disease activity was noticed throughout pregnancy while significant proportion of patients flared at postpartum. Before 21 pregnancies patients were treated with biologic agents. In 15, biologic treatment was discontinued close to pregnancy or during the first trimester. In this group, 5 (33%) of patients were classified as mild to severe activity prior to pregnancy. This number increased up to 8 (53%), 7 (47%) and 14 (93%) during the 1st, 2nd trimester and postpartum period respectively. In 6 patients in whom biologics were continued beyond first trimester, no significant change in degree of disease activity was noticed. Interestingly, in the group of non-biologics treated patients, an improvement in disease activity was observed – the proportion of patients with mild to severe disease activity decreased from 85% close to pregnancy to 69% in the 1st and 2nd trimester and 58% in the 3rd one while an increase to 83% was observed after pregnancy. During 6 pregnancies, corticosteroids were initiated or the dosage increased - 83% in pregnancies where biologics were stopped before pregnancy.

Table 1. Disease activity during pregnancy

N (%)	Before	1st trimester	2ndtrimester	3rd trimester	Postpartum
No	15 (44%)	14 (41%)	13 (38%)	16 (48%)	6 (18%)
Mild	9 (26%)	10 (29%)	10 (29%)	9 (27%)	9 (27%)
Moderate to severe	10 (29%)	10 (29%)	11 (32%)	8 (24%)	18 (55%)

Conclusions: Patients with PsA definitely flare after pregnancy. Our results suggest that stopping treatment with biologic agents before pregnancy is associated with flare during pregnancy and the postpartum period. It seems that in terms of PsA disease activity, it may be recommended to continue treatment with biologic agents throughout pregnancy

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AB0777 CHARACTERISTICS OF AMYLOID A DEPOSITION IN PSORIATIC ARTHROPATHY AND IN RHEUMATOID ARTHRITIS – A COMPARATIVE POSTMORTEM CLINICOPATHOLOGIC STUDY OF 161 RHEUMATOID AND 12 PSORIATIC ARTHRITIS PATIENTS

M. Bély¹, Á. Apáthy². ¹Department of Pathology, Policlinic of the Order of the Brothers of Saint John of God; ²Department of Rheumatology, St. Margaret Clinic Budapest, Budapest, Hungary

Background: The aim of this study was to determine the prevalence and extent of amyloid A deposition on different tissue structures in various organs of rheumatoid arthritis (RA) and psoriatic arthritis (PsA) patients.

Methods: AAa was detected in 34 (21.1%) (females: 29, average age: 64.3 years, range: 83–32, onset of RA: 48.6, average disease duration: 15.7 years; males: 5, average age: 51.2 years at death, range: 88–19, onset of RA: 41.3, average disease duration: 14.8 years) of 161 RA, and in 2 (16%) female: 2, average age: 57.5 years, range: 63–52, onset of PsA: 47.5, average disease duration: 11.0 years) of 12 PsA patients.

RA and PsA were diagnosed clinically according to the criteria of the American College of Rheumatology (ACR) [1,2].

Amyloid deposits on different tissue structures [arteriole, small artery, medium size artery, venule, small vein, medium size vein, interstitial collagen fiber, reticulin fiber (collagen IV), basal laminae, nerve, renal glomerulus] of 6 organs [heart, lungs, liver, kidney, skin and brain] were determined histologically. The extent of amyloid A deposits was evaluated by semi-quantitative, visual estimation on a 0 to 3 plus scale, based on the number of involved tissue structures per light microscopic field [3].

The prevalence and extent of amyloid A deposits on different tissue structures were compared by Student (Welch) t-probe.

Results: The average prevalence (in %) and the average extent of amyloid A deposits (absolute value) on different tissue structures of analyzed 6 organs in RA and PsA patients are summarized in Table.

Tissue structure	RA-AAa Prevalence in %	PsA-AAa Prevalence in %	p<	RA-AAa Average extent	PsA-AAa Average extent	p<
Arteriole	61,33	58,33	0,28	1,34	1,33	0,49
Small artery	50,28	58,33	0,46	0,94	1,21	0,25
Collagen IV	30,39	41,67	0,36	0,56	0,83	0,21
Interstitial collagen	45,86	33,33	0,22	0,78	0,58	0,24
Small vein	26,52	33,33	0,42	0,39	0,42	0,44
Medium size vein	21,55	25,00	0,47	0,37	0,33	0,43
Medium size artery	24,86	25,00	0,42	0,34	0,25	0,27
Venule	22,10	16,67	0,32	0,32	0,25	0,35
Nerve	4,97	16,67	0,17	0,08	0,17	0,24
Average/Structure	31,98	34,26	0,388	0,57	0,60	0,444
Average/Patient	32,27	36,21	0,244	0,585	0,668	0,198

Conclusions: The difference between average prevalence ($p<0.388$) and average amount ($p<0.444$) of amyloid A deposits/structures in RA and PsA patients was not significant.

The prevalence and extent of amyloid A deposits on different tissue structures of analyzed organs changed parallel in RA or PsA patients except for collagen IV and interstitial collagen.

The reverse prevalence and extent of amyloid A deposits on collagen IV and interstitial collagen fibers between RA or PsA patients may be due to structural (qualitative) changes of collagen IV resulting in its increased affinity of amyloid A in PsA patients. Qualitative change of collagens in systemic sclerosis patients has been demonstrated [4].

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AB0778 PATIENT AND PHYSICIAN GLOBAL ASSESSMENTS ARE POORLY CONNECTED IN INDIVIDUAL PATIENTS WITH PSORIATIC ARTHRITIS AND ONLY POORLY EXPLAINED BY OTHER CLINICAL MARKERS OF DISEASE ACTIVITY

E.M. Egsomse^{1,2}, O.R. Madsen^{1,2}. ¹Department of Rheumatology, Copenhagen University Hospital Rigshospitalet Gentofte, Hellerup; ²The DANBIO registry, Copenhagen University Hospital Rigshospitalet Glostrup, Glostrup, Denmark

Background: Assessment of disease activity is important in the evaluation and monitoring of patients with psoriatic arthritis (PsA) in clinical care and research. As there is no single “gold standard” variable for assessment of disease activity several markers of disease activity are used, among these “global assessment” by the patient (PaGI) and by the physician (PhGI). The agreement and interplay between PaGI and PhGI are not well clarified in patients with PsA, however.

Objectives: The objective of the study was to examine associations on the group level and agreements on the individual patient level between PaGI and PhGI as scored on visual analogue scales (VAS) in the daily clinic by patients with active PsA and their rheumatologists.

Methods: Traditional disease activity data on 76 PsA patients with active disease planned to initiate biological treatment were extracted from the Danish DANBIO registry. Data comprised swollen joint count (SJC), tender joint count (TJC), CRP, patient and physician global assessment (PaGI and PhGI) and pain (VAS), HAQ-DI and DAS28-CRP (4v). Parametric statistics was used. The predictability of PaGI and PhGI, respectively, by all other disease markers mentioned and by age and sex was examined using stepwise multiple regression analysis. Agreement between the VAS scores was expressed as the bias (mean difference between intra-individual scores) and the 95% lower and upper limits of agreement (LLoA;ULoA) according to the Bland-Altman method.

Results: Mean age was 52.2±11.1 years and mean DAS28-CRP 4.7±1.1. 59.2% were of the patients were women. Mean PaGI was 63.7±23.2 and PhGI 39.9±19.8 ($p<0.0001$). PaGI was significantly but weakly correlated with PhGI ($r=0.42$, $p<0.0001$) with a high standard error of estimation (SEE) =21.2. PaGI was independently predicted by pain ($\beta=0.76$, $p<0.0001$) and HAQ-DI ($\beta=0.19$, $p<0.01$) and was not predicted by PhGI ($p=0.61$) ($R=0.78$, SEE =10.5, $p<0.0001$). PhGI was independently predicted by SJC ($\beta=0.43$, $p<0.0001$) followed by pain ($\beta=0.41$, $p<0.0001$) and CRP ($\beta=0.20$, $p<0.05$) ($R=0.70$, SEE =14.4, $p<0.0001$) with no significantly contribution by PaGI ($p=0.49$). Differences between the patient-reported VAS-scores were small on the group level but on the individual level they were pronounced: LLoA;ULoA [bias] for PaGI

vs. PhGI was -21.9;69.5 [23.8], for PaGI vs. pain -17.1;22.0 [4.9], and for PhGI vs pain -60.8;23.0 [-18.9].

Conclusions: In patients with PsA, PaGI was in general scored considerably higher than PhGI. The two scores were poorly connected not only on the individual level but also on group level with no systematic differences between the scores. PaGI was best predicted by pain, and PhGI by SCJ reflecting patients and physicians diverging attitudes to the importance of the different disease manifestations. The findings highlight the challenge of understanding and dealing with discrepancies between assessments and attitudes by physicians and patients.

Disclosure of Interest: None declared

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AB0779 CLINICAL MANIFESTATIONS AND PARAMETERS AFFECTING THERAPEUTIC RESPONSE IN A COHORT OF 411 PSORIATIC ARTHRITIS PATIENTS

M.P. Migkos, T.-E. Memi, T.E. Markatseli, A.A. Drosos, P.V. Voulgaris.
Rheumatology Clinic, Department of Internal Medicine, Medical School,
University of Ioannina, Ioannina, Greece

Background: Psoriatic arthritis (PsA) has various clinical manifestations. The therapeutic response of patients may be affected by epidemiological parameters such as body mass index (BMI), disease duration, sex and the choice of therapy. **Objectives:** To illustrate the clinical manifestations of psoriatic arthritis and to assess the impact of epidemiological features and treatment choice on therapeutic response.

Methods: We retrospectively studied 411 patients diagnosed with PsA and we recorded the clinical manifestations of the disease. Data of 254 out of 411 patients were analyzed to examine the possible effect of BMI, disease activity, sex and treatment choice on therapeutic response. Patients were followed up at predefined time points [baseline, 12 weeks (wks), 24 wks, 48 and 240 wks after initiation of therapy]. The treatment response was assessed using Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), disease activity score-28 (DAS) -C-Reactive Protein (CRP), DAS28-erythrocyte sedimentation rate (ESR) and Health Assessment Questionnaire (HAQ). Patients were categorized in three groups: patients treated with biological synthetic disease modifying anti-rheumatic drugs (DMARDs) (anti-tumor necrosis factor alpha (TNFa) agents), patients treated with synthetic DMARDs and combined therapy (biological and synthetic DMARDs).

Results: The interval between psoriasis and PsA in women is shorter ($p=0.041$). PsA presented predominantly as asymmetric oligoarthritis (41,60%), followed by symmetric polyarthritis (24,57%). Arthritis of distal phalangeal joints was established in 3,16%, while 4,37% showed only enthesitis or dactylitis. Axial involvement was recorded in 26,27%. Twenty-eight patients had only axial disease and 80 had axial and peripheral joint involvement. 23/411 patients (5,60%), had eye involvement, 8/411 (1,95%) and 6/411 (1,46%) had involvement of the urogenital and gastrointestinal system, respectively. Eleven patients had pulmonary fibrosis. In the subgroup analysis of 254 patients, disease duration was positively correlated in all time points ($p<0.005$) with all disease activity scores. Statistical significant differences with respect to gender was observed for DAS28-CRP (3,93–2,96, 3,54–2,64 $p<0.001$) and DAS28-ESR (3,37 – 2,82 $p=0.001$, 3,06–2,62 $p=0.023$) at 12 and 24 wks respectively. More specifically women showed higher disease activity than males the first 6 months after treatment. BMI was not significantly correlated with the disease activity. Treatment with biological DMARD showed a statistically significant difference in all disease activity scores early in the disease course ($p<0.05$) in comparison with those receiving conventional DMARD. After the first 12 wks all disease activity scores were rather stable with no differences between the treatment groups.

Conclusions: PsA manifests predominantly as asymmetric oligoarthritis. Extra-articular manifestations are less frequent. Higher disease duration was associated with higher disease activity. Women early on disease course had higher DAS-28 scores. Treatment with biological DMARD showed better response in PsA patients compared with synthetic early in the disease course. However, after the first 12 wks there were no significant differences in treatment response with respect to treatment choice.

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AB0780 SECUKINUMAB SUSTAINS INDIVIDUAL CLINICAL RESPONSES OVER TIME IN PATIENTS WITH PSORIATIC ARTHRITIS: 2-YEAR RESULTS FROM A PHASE 3 TRIAL, FUTURE 2

P. Emery¹, I.B. McInnes², P.J. Mease³, M. Schiff⁴, L. Pricop⁵, S. Shen⁵, Z. Wang⁵, C. Gailliez⁶ on behalf of the FUTURE 2 study group. ¹University of Leeds, Leeds; ²University of Glasgow, Glasgow, United Kingdom; ³Swedish Medical Centre and University of Washington, Seattle; ⁴University of Colorado, Denver; ⁵Novartis Pharmaceuticals Corporation, East Hanover, United States; ⁶Novartis Pharma AG, Basel, Switzerland

Background: Achieving sustained clinical response to biologics is part of treatment target recommendations in psoriatic arthritis (PsA) and is aimed at optimising treatment goals.¹

Objectives: To evaluate patient (pt)-level secukinumab data and report the likelihood of improving, sustaining or worsening of American College of Rheumatology (ACR) response and disease status (disease activity score 28 based on C-reactive protein [DAS28-CRP]) from Week (Wk) 24 to 104 in pts with active PsA from the FUTURE 2 trial.^{2,3}

Methods: The findings of the FUTURE 2 trial through Wk 104 have been previously reported.³ *Post-hoc* shift analyses were performed on ACR response between Wks 24 and 104 for subgroups of secukinumab-treated pts, based on their higher response rate at an earlier time point in 1 out of 4 categories (ACR non-responders [NR], ACR20, 50 or 70) by evaluating whether the response improved, sustained or worsened at a later time point using exclusive categories and as observed analyses. Similar shift analysis on DAS28-CRP derived criteria were performed in 4 exclusive categories extrapolated from rheumatoid arthritis: high, moderate, low disease activity (HDA, MDA, LDA) or remission (REM) only.⁴ **Results:** In total, 86/100 (86%) and 76/100 (76%) pts in the secukinumab 300 and 150mg groups, respectively, completed the 104-wk treatment. Of which, 73/70 and 81/75 pts in secukinumab 300/150mg were eligible for ACR and DAS28-CRP shift analysis, respectively, from Wk 24 to 104. Baseline demographics and clinical characteristics were balanced across the two dose groups.^{2,3} Most secukinumab-treated pts who achieved at least an ACR20, 50 or 70 response and Psoriasis Area and Severity Index (PASI) 75 or 90 response at Wk 24, improved or sustained their response at Wk 104 (Figure, data not shown for PASI response). Similarly, a majority of pts who were in the MDA, LDA or REM category at Wk 24 sustained or improved their disease status related to DAS28-CRP score at Wk 104 (Figure).

Figure: Shift analysis in ACR and DAS28-CRP responses from Week 24 to 104

N = number of patients who completed Week 104 and had ACR or DAS28-CRP response available at both Weeks 24 and 104; n1 = number of patients with no ACR or DAS28-CRP response at Week 24, who completed Week 104 and had ACR or DAS28-CRP response available; n2–n4 = number of patients with ACR or DAS28-CRP response at Week 24, who completed Week 104 and had ACR or DAS28-CRP response available.

Conclusions: In this *post-hoc* analysis, a majority of secukinumab-treated pts who achieved at least ACR20 and PASI 75 response or at least MDA at Wk 24 sustained or improved their ACR and PASI responses or sustained or reduced their disease status at Wk 104. Numerically higher sustained response and LDA or REM rate was observed for secukinumab 300mg, thereby extending the sustainability of response and lowering the disease activity that has been previously reported at group level.^{2,3}

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