THU0246

CAN DISEASE ACTIVITY IN PATIENTS WITH PSORIATIC ARTHRITIS BE ADEQUATELY ASSESSED BY A MODIFIED DISEASE ACTIVITY INDEX FOR PSORIATIC ARTHRITIS (DAPSA) BASED ON 28 JOINTS?

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Background: 66/68 vs. 28 joint count has higher face validity in PsA. However, many databases/registries routinely collect only 28-joint count. It is not known if these data can be used to provide sufficient information on disease activity and response to therapy.

Objectives: To compute and test the potential validity of a simplified Disease Activity index for Psoriatic Arthritis (DAPSA) using 28 instead of 66/68 joint count.

Methods: We included PsA patients from the Danish national quality registry DANBIO, divided into examination (n=3157 patients, 24160 visits) and validation cohorts (n=3154 patients, 24160 visits) according to odd/even IDs. We defined: $DAPSA_{28} = (28TJC \times conversion\ factor_1) + (28SJC \times conversion\ factor_2) + patient\ global[0-10VAS] + pain[0-10VAS] + CRP[mg/dL]$. Identification of conversion factors was performed by Generalised Estimating Equations (GEE, multiple visits per patient) in the examination cohort, and criterion, correlational and construct validity explored in the validation cohort.

Results: Mean(SD) age: 52.0 (13.8) years, 54.4% females. GEE: $Conversion\ factor_1 = 1.6$, 95% CI(1.6–1.7), $conversion\ factor_2 = 1.6$, 95% CI(1.5–1.6), leading to: $DAPSA_{28} = (28TJC + 28\ SJC) \times 1.6 + patient\ global[0-10VAS] + pain[0-10VAS] + CRP[mg/dL]$. **Criterion validity:** Physician global and DAPSA/DAPSA₂₈ were similarly correlated ($r = 0.63/r = 0.61$, $p < 0.001$). DAPSA/DAPSA₂₈ had comparable discriminative power, expressed as standardised mean difference (DAPSA, 0.90; DAPSA₂₈, 0.93) to distinguish between patients in high (starting bDMARD) and low (not starting/changing s/bDMARD for ≥ 60 days) disease activity. Agreement between DAPSA/DAPSA₂₈ disease activity states was best for remission/low disease activity (table 1).

Kappa with quadratic weighting of DAPSA/DAPSA₂₈ disease activity states indicated very good agreement; 0.92 95% CI (0.92–0.92). Standardised response means for DAPSA/DAPSA₂₈ were $-0.96/-0.92$ (n=572) for visits after start of bDMARD. **Correlational validity:** Baseline DAPSA/DAPSA₂₈ had strong correlation with DAS28CRP ($r = 0.87/r = 0.93$), SDAI ($r = 0.92/r = 0.99$), $p < 0.001$. Bland-Altman plot showed better agreement between DAPSA/DAPSA₂₈ for low than high disease activity (figure 1). **Construct validity:** DAPSA/DAPSA₂₈ were similarly correlated to HAQ; $r = 0.60/0.62$, $p < 0.001$. DAPSA/DAPSA₂₈ discriminated patients reporting their symptom state as acceptable (n=1140) vs. not acceptable (n=1045) equally well: mean(SD) 9.1 (8.7)/8.4 (8.0) and 24.2 (14.9)/22.5 (13.8), respectively.

Conclusions: DAPSA₂₈ showed good criterion, correlational and construct validity, and sensitivity to change. However, agreement between DAPSA and

DAPSA₂₈ was better for low than high disease activity levels. We recommend that 66/68 joint count should be performed and the original DAPSA should be preferred in PsA. However, our study suggests that data sets with only 28-joint counts available can use DAPSA₂₈, especially in patients with low disease activity.

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THU0247

SPA-NET: A DISEASE-SPECIFIC INTEGRATED EHEALTH SYSTEM AND QUALITY REGISTRY FOR SPONDYLOARTHRITIS IN DAILY PRACTICE IN THE NETHERLANDS

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Background: Regular and personalised monitoring of disease activity, physical activity, medication use and side effects is essential to improve and maintain patients' health-related quality of life in spondyloarthritis (SpA). Transparency on outcomes, safety, practice variation and efficiency of care are increasingly demanded. Furthermore, patient empowerment and shared decision making are advocated. An integrated eHealth system including an electronic patient medical record (EMR) and real-time quality management system could provide a solution to meet these demands.

Objectives: To develop and test the feasibility of a disease-specific integrated eHealth system and quality registry for SpA in the Netherlands ('SpA-Net'), in order to 1) improve the quality of care for the individual patient, 2) provide transparency on treatment results, practice variation and costs and 3) to produce data for scientific research.

Methods: The eHealth system was developed in four phases. First, the content and design were discussed with experts in the field of SpA and patients (pts). Second, the database, EMR and quality management system were developed. Third, multiple rounds of internal and external testing were performed in collaboration with IT specialists, care providers and pts. Fourth, the eHealth system was implemented in practice and feasibility was tested among pts and care providers through semi-structured focus interviews.

Results: SpA-Net was designed and developed in 2015 and implemented into practice in May 2016. All pts entered into SpA-Net have a diagnosis of SpA according to their treating rheumatologist. There are no inclusion or exclusion criteria towards the subtype of SpA or treatment. Information prospectively collected at routine outpatient consultations on diagnosis, demographics, specific SpA manifestations, patient reported outcome measures, clinical outcomes, comorbidities, medication use and safety, supplemented with data from the hospital information system, is directly stored in a database. The comprehensive individual patient data are readily available to the physician and an excerpt of this can be accessed by the patient. Prior to each visit, pts complete online questionnaires. The information is presented in graphs wherever possible (figure 1).

In December 2017, 1078 pts participated in SpA-Net (mean [SD] age 53.7 [14.3] years, 46.6% females), and inclusion is ongoing. Focus group interviews were held with 16 pts, 9 rheumatologists, and 5 nurses. Pts considered the layout of SpA-Net as clear, accessible and intuitive. They felt the use of questionnaires resulted in better quality of care and communication, and appreciated having access to their EMR with lay-term explanations. Points of improvement were the login process and providing more details about the care provider's notes. Care providers appreciated the additional information for (preparing) consultations. Barriers against use of SpA-Net were the initial time required to adopt the EMR and the quantity of data entry.

DAPSA ₂₈ (n=6421)	DAPSA (n=6421) n(%) stratified by DAPSA disease activity states			
	DAPSA≤4	DAPSA>4 and ≤14	DAPSA>14 and ≤28	DAPSA>28
DAPSA ₂₈ ≤4	1135 (98.4)	126 (5.6)	4 (0.2)	0 (0)
DAPSA ₂₈ >4 and ≤14	18 (1.6)	2073 (91.5)	345 (17.8)	14 (1.3)
DAPSA ₂₈ >14 and ≤28	0 (0)	66 (2.9)	1509 (77.9)	248 (23.3)
DAPSA ₂₈ >28	0 (0)	80 (4.1)	803 (75.4)

Abstract THU0247 – Figure 1. Example of graph in SpA-Net reporting the evolution of ASDAS in relation to medication use over time

Conclusions: SpA-Net enables regular monitoring of pts with SpA and can serve as a first step to optimise knowledge and communication between pts and care providers. Both pts and care providers thought SpA-Net improves quality of care in daily practice.

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THU0248 ASSOCIATION OF KINESIOPHOBIA, AEROBIC EXERCISE, FUNCTIONAL IMPAIRMENT AND DISEASE ACTIVITY OF PATIENTS WITH RHEUMATOID ARTHRITIS AND SPONDYLOARTHRITIS

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Background: Rheumatoid arthritis (RA) and spondyloarthritis (SA) are the most common chronic inflammatory rheumatism, leading to functional disability, but also cardiovascular mortality. Aerobic exercise (AE) is one of the most effective non-pharmacological resources for cardiovascular rehabilitation while the patients RA and SA have difficulty to join the practice of physical exercise. It can be explained by the presence of kinesiophobia, fear that the movement exacerbates the pain and disease.

Objectives: To compare the level of AE of patients with RA and SA with healthy subjects and to verify the association between kinesiophobia, the level of activity of the disease and the functional disability

Methods: Fifty RA patients and fifty SA patients followed by the rheumatology department of the University Hospital of Besançon and fifty healthy age-matched subjects were included. The main inclusion criteria: between 18 and 80 years old and without orthopaedic surgery <1 year. The disease activity (DAS-28 and ASDAS), the functional disability (HAQ and BASFI), the level of AE (SQUASH questionnaire) and kinesiophobia (TSK questionnaire) were evaluated. The control group answered to the SQUASH questionnaire. The t-test was used to compare inflammatory rheumatism groups with the control group (healthy subjects). The Pearson Correlation Test for each group (RA and SA) was used to verify the associations between variables.

Results: The level of AE is significantly higher in healthy subjects ($p=0.022$). In the RA group, kinesiophobia is associated with disease activity, functional disability and level of AE. In the SA group, kinesiophobia is associated only with the functional disability. Patients have a low level of AE compared to healthy subjects. However, only the RA group has an association between kinesiophobia and AE. In the SA group, functional disability appears to be a factor limiting the practice of AE.

Abstract THU0248 – Table 1. Results of pearson correlation test between variables

	Aerobic Exercise	Kinesiophobia	Functional Disability	Disease Activity
RA				
Aerobic Exercise	-	$r = -0.280^*$	$r = -0.414^{**}$	$r = -0.149$
Kinesiophobia	$r = -0.280^*$	-	$r = 0.522^{**}$	$r = 0.327^*$
Functional Disability	$r = -0.414^{**}$	$r = 0.522^{**}$	-	$r = 0.531^*$
SA				
Aerobic Exercise	-	$r = -0.165$	$r = -0.40$	$r = -0.064$
Kinesiophobia	$r = -0.165$	-	$r = 0.345^*$	$r = 0.224$
Functional Disability	$r = -0.040$	$r = 0.345^*$	-	$r = 0.737^{**}$

* $p < 0.005$; ** $p < 0.005$

Conclusions: RA and SA patients need to be encouraged and better informed about the benefits of physical exercise.

Disclosure of Interest: None declared

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THU0249 MORE THAN 60% PATIENTS WITH SPONDYLOARTHRITIS REPORT PERIPHERAL MANIFESTATIONS: AN ANCILLARY ANALYSIS OF THE ASAS-COMOSPA STUDY

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Background: Peripheral manifestations (arthritis, enthesitis and dactylitis) can be observed in patients with Spondyloarthritis (SpA)¹, but the factors associated with their presence are not well known. Studies are needed in order to thoroughly evaluate these symptoms.

Objectives: a) To describe the prevalence of peripheral manifestations in patients with SpA in a world-wide population; and b) to determine the factors associated with the presence of these manifestations.

Methods: Data from the ASAS-COMOSPA study were analysed. The prevalence of each peripheral manifestation was evaluated with regard to the criteria fulfilled by the patient (ASAS axial, ASAS peripheral, CASPAR) and with regard to the time of occurrence of axial symptoms (before/concomitant/after). Factors associated with the presence of these peripheral manifestations were also explored by univariate and multivariate logistic regression.

Results: Out of the 3984 patients included in ASAS-COMOSPA, 2562 (64.3%) reported, at least, one peripheral manifestation. Among these, 2051 patients (51.5% from the total database) had current or past history of peripheral arthritis, being more frequent among patients who met CASPAR and Peripheral ASAS criteria (see figure 1). Involvement was more frequently oligoarticular (40.2%) and appearing after axial symptom onset (48.9%). Multivariate analysis showed that patients from South America [OR 2.45, (95%CI 1.93–3.11)], the presence of enthesitis [OR 2.46, (95%CI 2.11–2.86)], dactylitis [OR 6.46, (95%CI 4.78–8.71)], skin psoriasis [OR 2.46, (95%CI 1.79–3.37)], HLAB27+ [OR 0.83, (95%CI 0.72–0.97)] and inflammatory back pain (IBP) [OR 0.37, (95%CI 0.29–0.47)] were associated with peripheral arthritis.

A total of 1506 (37.8%) and 618 (15.6%) patients reported enthesitis and dactylitis, respectively. Both occurred after axial symptoms onset in 58.3% and 60.8% of the patients, respectively. Similar results than peripheral arthritis were obtained in the multivariate analysis regarding these two peripheral manifestations, with exception of IBP and HLAB27+, which were not associated with enthesitis.

*434 patients fulfil neither axial ASAS, nor peripheral ASAS, nor CASPAR criteria. (P.A. 43.8%, Ent. 34.8%, Dac. 11.3%).

P.A.: Peripheral Arthritis, Ent.: Enthesitis, Dac.: Dactylitis.

Abstract THU0249 – Figure 1. *434 patients fulfil neither axial ASAS, nor peripheral ASAS, nor CASPAR criteria.