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: DAPSA28=(28TJCxconversion factor₁)+(28SJCxconversion factor₂)+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 factor₁=1.6, 95% CI(1.6–1.7), conversion factor₂=1.6, 95% CI(1.5–1.6), leading to: DAPSA28=(28TJC+28 SJC)x1.6+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.

Disclosure of Interest: B. Michelsen: None declared, J. Sexton: None declared, J. Smolen: None declared, D. Aletaha: None declared, N. Krogh: None declared, D. van der Heijde: None declared, T. Kvien: None declared, M. Hetland Consultant for: Abbvie, Biogen, BMS, CellTrion, MSD, Novartis, Orion, Pfizer, Samsung, UCB.

DOI: 10.1136/annrheumdis-2018-eular.3134

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.

DAPSA28 (n=6421)	DAPSA(n=6421) n(%) stratified by DAPSA disease activity states			
	DAPSA≤4	DAPSA>4 and≤14	DAPSA>14 and≤28	DAPSA>28
DAPSA28≤4	1135 (98.4)	126 (5.6)	4 (0.2)	0 (0)
DAPSA28>4 and≤14	18 (1.6)	2073 (91.5)	345 (17.8)	14 (1.3)
DAPSA28>14 and≤28	0 (0)	66 (2.9)	1509 (77.9)	248 (23.3)
DAPSA28>28	0 (0)	80 (4.1)	803 (75.4)	