divided in a medial, central and lateral region, in which the following conditions could be present: 1) no abnormality, 2) disease activity, 3) deformity or 4) deformity and disease activity. A multilevel analysis was performed using condition per forefoot region as the independent variable and PP or PTI in the corresponding region as the dependent variable.

Results: Statistically significant higher PP and PTI were found in forefoot regions when deformities were present (RR 1.2, CI 1.1–1.3, $P < 0.0001$), compared to forefoot regions without forefoot abnormalities. No significant differences in PP and PTI were found when solely local disease activity was present in forefoot regions (RR 1.0, CI 0.9–1.2, $p = 0.749$ and RR 1.0, CI 0.8–1.2, $p = 0.850$ respectively).

Conclusions: Deformities in the medial, central and lateral forefoot regions are related to higher plantar pressures measured in these regions. The absence of an association between local disease activity and plantar pressure might be explained by the low prevalence of MTP pain or swelling as detected by palpation. Future research with ultrasound measurements to detect disease activity is recommended to reveal the effect of forefoot disease activity on plantar pressure.

REFERENCES:

1. van der Leeden M, Steultjens M, Dekker JHM, Prins APA, Dekker J. Forefoot joint damage, pain and disability in rheumatoid arthritis patients with foot complaints: The role of plantar pressure and gait characteristics. *Rheumatology* 2006;45(4):465–9.
2. Turner DE, Woodburn J. Characterising the clinical and biomechanical features of severely deformed feet in rheumatoid arthritis. *Gait Posture* 2008;28(4):574–80.
3. Bowen CJ, Culliford D, Allen R, Beacroft J, Gay A, Hooper L, et al. Forefoot pathology in rheumatoid arthritis identified with ultrasound may not localise to areas of highest pressure: cohort observations at baseline and twelve months. *J Foot Ankle Res*. 2011;4(1):25.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5659

FRI0745-HPR IMPLICIT AND EXPLICIT ATTITUDES AND ASSOCIATIONS OF RHEUMATOID ARTHRITIS PATIENTS TOWARDS CONVENTIONAL DISEASE MODIFYING ANTI-RHEUMATIC DRUGS AS POSSIBLE TARGETS FOR IMPROVING MEDICATION ADHERENCE

M. Van Heuckelum¹, E. van den Ende², L. Vandeberg³, S. van Dulmen⁴, A. Linn³, B. van den Bemt¹. ¹Rheumatology and Pharmacy, ²Rheumatology, Sint Maartenskliniek, Nijmegen, ³ASCOR, University of Amsterdam, Amsterdam, ⁴Primary and community care, Radboudumc, Nijmegen, Netherlands

Background: Medication adherence to conventional disease modifying anti-rheumatic drugs (cDMARDs) is suboptimal in patients with rheumatoid arthritis (RA) with medication adherence rates ranging from 30 to 80% [1]. Since existing interventions are only partially effective, identifying (modifiable) factors associated with non-adherence might help to find targets for more effective adherence-improving interventions. There is growing evidence that not only explicit attitudes (conscious responses) are responsible for behaviour, but also implicit attitudes (unconscious responses) might be involved [2].

Objectives: The aim of this study is to examine implicit and explicit attitudes of RA patients towards cDMARDs, and their association with medication adherence.

Methods: A multicenter observational cohort study in two rheumatology specialized centres was initiated to examine implicit and explicit attitudes of 254 consecutive adult RA patients (ACR 2010 criteria) treated with at least one cDMARD for a minimum period of one year. Prior to their regular consultation, patient's implicit attitudes were measured with the Single Category Implicit Association Test and explicit attitudes were evaluated with a bipolar evaluative adjective scale and the validated Beliefs about Medicines Questionnaire (BMQ-specific). Primary outcome was self-reported medication adherence measured with the validated Compliance Questionnaire on Rheumatology.

Results: Implicitly, more patients displayed negative attitudes (49.0%) and sickness related associations (60.9%) than explicitly (21.3% and 23.5% respectively). Only significant correlations between explicit attitudes and associations of RA patients and beliefs about medicines were found. The lowest levels (48.8%) of self-reported adherence were found in patients who displayed congruent negative (implicit and explicit) attitudes. The highest levels (71.4%) of self-reported adherence were found in patients who displayed congruent (implicit and explicit) health (versus sickness) related associations.

Conclusions: Implicit attitudes and associations of RA patients were not always congruent with explicit attitudes and associations. Slightly higher adherence rates were found in patients who displayed positive explicit attitudes and associations.

However, implicit and explicit attitudes and associations of RA patients towards cDMARDs and their adherence should be further investigated with MEMS (medication event monitoring system) devices.

REFERENCES:

- 1] BJF van den Bemt, et al. *Expert Rev Clin Immunol* 2012 May;8(4):337–51. doi:10.1586/eci.12.23
- 2] Linn, et al. *Front Pharmacol*. 2016 Aug 10;7:233. doi:10.3389/fphar.2016.00233. eCollection 2016

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4629

FRIDAY, 15 JUNE 2018

Public health, health services research and health economics

FRI0746 NURSING CONSULTATION VERSUS RHEUMATOLOGIST FOLLOW UP FOR PATIENTS WITH STABLE RHEUMATOID ARTHRITIS: A RANDOMIZED CONTROLLED TRIAL

G.S.K. Kwok¹, T.T. Cheung², M.L.M. Tang¹, C.K.Y. Yuen¹, H.Y. Chung², W.C. S. Lau². ¹Medicine, Queen Mary Hospital, ²Medicine, The University of Hong Kong, Hong Kong, Hong Kong

Background: Conventionally, patients with RA have been managed by scheduled routine consultations by rheumatologists every 3 to 6 months. However, the burden of RA has been increasing globally. Although rheumatology nursing consultation was shown to be an effectiveness management strategy in western countries, its feasibility has not been evaluated in Chinese population. Therefore, we would like to compare the efficacy of rheumatology nursing consultation with usual rheumatologist follow-up in Hong Kong.

Objectives: To evaluate the efficacy of rheumatology nursing consultation in patients with stable RA over 1 year.

Methods: Study design and patient selection: This is a single centre, randomized controlled, non-inferiority trial conducted in Queen Mary Hospital. Patients with RA were recruited from the rheumatology clinic in Queen Mary Hospital. Subjects have to fulfill the 2010 ACR-EULAR classification criteria for RA, with DAS28-CRP ≤ 3.2 for at least 6 months with no increase in dose of conventional synthetic disease modifying anti-rheumatic drugs (csDMARDs). Subjects with systemic manifestation of RA, current malignancies or current use of biologic therapies were excluded.

Intervention: Subjects were randomized in a 1:1 ratio to the following treatment groups.

Usual rheumatologist follow-up (control): Subjects were followed up by rheumatologists or registrars every 4 months. The treatment target was to maintain the DAS28-CRP ≤ 3.2 .

Rheumatology nursing consultation: Subjects were followed up by the rheumatology nurses every 4 months. At 12 months, all subjects will be reviewed by a senior rheumatologist. The treatment target was to maintain the DAS28-CRP ≤ 3.2 .

Outcomes: The primary outcome was the difference in proportion of subjects who remained to have DAS28-CRP ≤ 3.2 at 12 months. Secondary outcomes included the difference in proportion of subjects with DAS28-CRP > 0.6 at 12 months; the change in modified Sharp score, health assessment questionnaire (HAQ) score, patients' drug compliance from baseline and patients' satisfaction at 12 months.

Statistical analysis: SPSS v.22 was used to performed the statistical analyses according to intention to treat and per protocol analysis. The comparisons between 2 groups was performed by Student's t-test for continuous variables and chi-square test for categorical variables. A one-way repeated measures ANOVA was conducted to determine if there was a difference in DAS28-CRP between treatment groups during the study period.

Results: 276 subjects were randomized to receive rheumatology nurse consultation or usual rheumatologist follow-up. At 12 months, 95.5% and 90.5% of subjects in the nurse consultation and rheumatologist follow-up remained to have low disease activity respectively, with an adjusted treatment difference of 5.0% (CI -1.27–11.54) and showed non-inferiority with a pre-defined margin of -10%. However, more subjects in the rheumatologist follow-up experienced DAS28-CRP > 0.6 at 12 months. One-way repeated measures ANOVA test showed significant difference in DAS28-CRP between 2 treatment group over time. No statistically significant differences were seen in other outcome measures.

Conclusions: Rheumatology nurse consultation is not inferior to regular rheumatologist follow-up for rheumatoid arthritis patients with low disease activity.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3217

Saturday, 16 JUNE 2018

HPR Measuring health (development and measurement properties of PROs, tests, devices)___

SAT0716-HPR PATIENTS PREFERENCE GOES TO METHOTREXATE AUTOINJECTORS OVER PREFILLED SYRINGES: RESULTS FROM A PHASE III TRIAL, SELF

A. Sarau¹, C. Hudry^{2,3}, E. Zinovieva⁴, H. Herman-Demars⁴ on behalf of All investigators of SELF study. ¹Rheumatology Department, CHU Cavale Blanche, Brest; ²Rheumatology Department, Cochin Hospital; ³Institut de Rhumatologie Paris 8; ⁴Medical Department, Nordic Pharma, Paris, France

Background: The offer of injectable MTX in Europe expanded during past few years with different types of enhanced devices such as prefilled syringes and autoinjector pens.

Objectives: SELF trial intended to compare historical MTX prefilled syringes vs a new MTX autoinjector in terms of treatment adherence, functional capacity and patients' preference at 6 months in RA patients.

Methods: SELF was a phase III, randomised open-label trial, conducted in France between Sept. 2015 and March 2017. It included RA patients, treated by oral or injectable MTX for ≥3 months (monotherapy or association). Patients were randomised in two arms: MTX in prefilled syringes (PS) or MTX in autoinjectors (AI) at the dosage decided by the investigator. Primary objectives of the trial were to prove the 4% non-inferiority of AI vs PS in terms of patients' adherence and functional capacity (HAQ-DI) at 6 months. Secondary objectives included the evaluation of satisfaction and patients' preference.

Results: Between Sept. 2015 and Sept. 2016 50 rheumatologists, mostly in private practice, included 271 patients, 197 of which composed the *per protocol* population. Patients baseline characteristics were [mean (±SD)]: age: 59.2 (±12.3) yrs; BMI: 26.0 (±4.9) kg/m²; RA duration: 5.35 (±6.70) yrs; DAS28: 3.1 (±1.2); HAQ-DI: 0.6 (±0.6). All patients were treated by MTX (1/3 oral; 2/3 parenteral) at a mean dose of 15.4 (±4.1) mg/wk. There were no significant differences at baseline between PS and AI arms. At 6 months, the treatment adherence was over 95% for both arms, and HAQ-DI was improved by a mean of 0.05 in both arms. The AI 4% non-inferiority as compared to PS was shown for both primary criteria.

Patients' reported satisfaction was very significantly higher ($p \leq 0.001$) in AI arm vs PS for the following criteria: easy to use, pleasant, satisfying, willingness for further utilisation and significantly higher ($p < 0.05$) for reassuring and not constraining. Of the 132 patients who experienced both devices (during the study or before it), 127 (96%; $p < 0.001$) preferred the auto injector over the historical prefilled syringe. No unexpected safety issues were observed during this trial and injection point safety tolerance satisfaction was higher for AI vs PS.

Conclusions: SELF trial showed that although the new MTX autoinjector is comparable to historical prefilled syringe in terms of treatment adherence and functional capacity improvement, it is significantly superior in terms of patients'

satisfaction. Over 95% of patients who have tried both devices report preferring the pen.

Disclosure of Interest: A. Sarau Consultant for: Nordic Pharma, C. Hudry Consultant for: Nordic Pharma, E. Zinovieva Employee of: Nordic Pharma, H. Herman-Demars Employee of: Nordic Pharma

DOI: 10.1136/annrheumdis-2018-eular.3627

SAT0717-HPR PSYCHOMETRIC TESTING OF A GERMAN VERSION OF THE EVALUATION OF DAILY ACTIVITY QUESTIONNAIRE IN RHEUMATOID ARTHRITIS

A. Hammond¹, K. Niedermann², S. Tyson³, A. Tennant⁴. ¹Centre for Health Sciences Research, University of Salford, Salford, UK; ²Gesundheit, ZHAW, Winterthur, Switzerland; ³Div. Nursing, Midwifery and Social Work, Manchester University, Manchester, UK; ⁴ICF Network, Swiss Paraplegic Research, Nottwil, Switzerland

Background: The Evaluation of Daily Activity Questionnaire (EDAQ) is a patient reported outcome (PRO) of activity limitations. The English EDAQ is reliable, valid and a comprehensive measure of the commonest problems experienced by people with rheumatoid arthritis (RA) and musculoskeletal conditions.^{1,2} It includes 138 items in 14 'domains' (Eating/Drinking; Personal Care; Dressing; Bathing; Cooking; Moving Indoors; House Cleaning; Laundry; Moving and Transfers; Moving Outdoors; Gardening/Household Maintenance; Caring; Leisure/Social Activities). All items are scored on a 0–3 scale (no difficulty to unable to do). There is no similar measure available in German. PROs must be tested in target languages and conditions, prior to use, to ensure validity and reliability.

Objectives: To linguistically validate a German EDAQ and test its reliability and validity in German-speaking people with RA.

Methods: The English EDAQ was forward-backward translated to German. Cognitive debriefing interviews were conducted and the German EDAQ developed. Participants from a Rheumatology clinic (Switzerland) and arthritis patient organisations (Switzerland, Germany, Austria) then completed postal questionnaires including: demographic questions, German EDAQ, Health Assessment Questionnaire (HAQ), SF36v2, RA Quality of Life scale (RAQOL), and a hand pain numeric rating scale (NRS). Three weeks later, the EDAQ was mailed again. Test-retest reliability of domain scores, and validity of the 14 German EDAQ domains against the other measures, were evaluated using nonparametric correlations. Internal consistency was tested using Cronbach's alpha.

Results: Six German-speaking people with RA were interviewed, recommended changes reviewed by the expert panel and the German EDAQ agreed. 163 people then completed questionnaires: 145 women and 18 men; mean age=52.84 (SD14.94) years; mean RA duration=15.73 years (SD12.12). 85 (45%) were employed; 21 had children<18 y at home. Median pain score=4 (IQR 2–6) and fatigue=5 (IQR 3–7).

107 (65%) completed a second questionnaire. Test-retest reliability of total domain scores was excellent for all domains ($r_s = 0.80–0.93$). Internal consistency was high in all domains: Cronbach's alpha=0.84–0.96. All EDAQ domains (except Caring) correlated significantly ($p < 0.001$) with: HAQ $r_s = 0.73–0.87$; SF36v2 (Physical Function) $r_s = -0.61$ to -0.84 ; SF36v2 Bodily Pain $r_s = -0.53$ to -0.65 ; SF36v2 (Vitality) $r_s = -0.27$ to -0.31 ; RAQOL $r_s = 0.55–0.68$; and hand pain $r_s = 0.43–0.52$. Correlations were lower in the 'Caring' domain due to the smaller sample size ($n=77$), although mostly still significant ($p < 0.01$; $r_s = 0.25$ to 0.42 ; except SF36v2 Vitality= -0.10 non-significant).

Conclusions: The German EDAQ is a valid and reliable measure of daily activity in people with RA. Either the whole EDAQ or individual domains can be used in clinical practice to identify clients' daily activity problems and help find solutions, or as an outcome measure in research and audit. A User Manual is available.³

REFERENCES:

- [1] Hammond, et al. Rheumatology 2015;54:1605–1615.
- [2] Hammond, et al. Disabil Rehabil 2017. doi:10.1080/09638288.2017.1323027
- [3] Hammond A, et al. The EDAQ User Manual v2 2016. <http://usir.salford.ac.uk/30752/>

Patients' reported satisfaction (Likert Scale)	Easy to use	Pleasant	Satisfying	Motivating for further utilisation	Reassuring	Not constraining	Not stressful	Not painful
Strongly agree (AI/PS)	60%/21%	7%/0%	63%/21%	61%/35%	30%/14%	51%/36%	55%/41%	51%/38%
Agree (AI/PS)	32%/42%	20%/11%	31%/50%	23%/34%	52%/60%	18%/17%	23%/26%	21%/31%
Neither agree nor disagree (AI/PS)	4%/23%	32%/26%	2%/19%	9%/17%	9%/15%	19%/24%	14%/17%	25%/24%
Disagree (AI/PS)	1%/6%	26%/30%	2%/6%	6%/10%	4%/5%	10%/15%	4%/8%	1%/6%
Strongly disagree (AI/PS)	4%/8%	14%/33%	1%/4%	5%/4%	5%/6%	2%/8%	8%/9%	1%/1%
Significance level	p<0.001	p<0.001	p<0.001	p=0.001	p=0.02	p=0.02	p=0.05	p=0.15