SAT0731-HPR EARLY POSTOPERATIVE OUTCOMES OF UNILATERAL VERSUS BILATERAL TOTAL KNEE ARTHROPLASTY

M. Eymir¹, B. Ünver¹, V. Karatosun². ¹School of Physical Therapy and Rehabilitation; ²Department of Orthopaedics and Traumatology, School of Medicine, Dokuz Eylül University, Izmir, Turkey

Background: Many patients in need of total knee arthroplasty (TKA) have bilateral symptoms and require surgery to both extremities. Performance of a bilateral procedure under a single anaesthetic provides a reduced hospitalisation time, an isolated anaesthesia risk, a single rehabilitation, and substantial cost savings. However, previous studies' reports vary from unilateral TKA producing better outcomes than bilateral TKA, the 2 procedures producing no significant difference, and bilateral TKA producing a better outcome than unilateral TKA. There is a need for new studies to examine the differences between unilateral and bilateral TKA in terms of the early postoperative outcomes.

Objectives: The aim of this study was to compare the effect of the unilateral and bilateral TKA on the early postoperative outcomes.

Methods: The study group consisted of 71 patients (106 knees), who underwent primary TKR because of arthrosis were stratified either unilateral or bilateral TKA status. The mean age of unilateral (n=36) subjects were 66.00±10.71 years, and the mean age of bilateral (n=35) subjects were 64.17±7.61 years. Patients were evaluated regarding the knee function score (Hospital for Special Surgery (HSS) score), pain (Numeric Pain Rating Scale (NPRS)), knee range of motion, length of hospital stay, the day of active straight leg raise, the day of knee flexion angle achieved 70 degrees, quality of life (Short-Form 12 Health Survey (SF-12)). Functional activities were evaluated using the Iowa Level of Assistance Scale and walking speed was evaluated using the Iowa Ambulation Velocity Scale. Patients were evaluated preoperatively and at discharge. All patients underwent the same rehabilitation program.

Results: At baseline, demographic and anthropometric characteristics were similar in groups and there was no statistically difference between groups (p>0.05). When the patients' knee range of motion were compared, there were statistically differences (p=0.027) between groups after surgery. The unilateral group had better results in terms of postoperative knee flexion degree. There were no statistical differences in terms of the pain degree, HSS score, length of hospital stay, the day of active straight leg raise, the day of knee flexion angle achieved 70 degrees, IOWA help level and IOWA walking speed, SF-12 score between groups before and after TKA (p>0.05).

Conclusions: According to our results, the unilateral group had better result in term of postoperative knee flexion degree. On the other hand, the bilateral method may provide an advantage in terms of a single rehabilitation, and substantial cost savings. Therefore, in this comparison to obtain more comprehensive results studies on larger series are needed. In this way, a more uniform and objective data can be achieved.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5622

SAT0732-HPR RATING OF PERCEIVED EXERTION IN PATIENTS WITH RHEUMATOID ARTHRITIS – WHICH ARE THE CORRELATES?

N. Brodin^{1,2}, N. Bobst³, C.H. Opava⁴. ¹Division of Physiotherapy, Karolinska Institutet, Department of Neurobiology, Care Sciences and Society, Huddinge; ²Division of Physiotherapy, Danderyd University Hospital, Department of Orthopaedics, Stockholm, Sweden; ³Departement G, Zürcher Hochschule für angewandte Wissenschaften (ZHAW), Zurich, Switzerland; ⁴Division of Physiotherapy, Karolinska Institutet, Department of Neurobiology, Care Sciences and Society, Huddinge, Sweden

Background: People with rheumatoid arthritis (RA) are recommended to participate in physical activity to improve or maintain their health. The intensity of the physical activity is important to gain the health benefits. One way for the individual to monitor the intensity of physical activity is to use the Borg scale for rating of perceived exertion (RPE), which is claimed to be strongly correlated to heart rate (HR). While this is true for healthy individuals, RPE in people with RA might however be influenced by a range of additional factors.

Objectives: To analyse correlates of RPE assessed at the end of an aerobic capacity test in patients with RA.

Methods: Data from 192 people with RA participating in the ^{PARA} 2010 study were analysed. Their mean age was 59 years (SD 9.7), 159 (83%) were women, mean disease duration was 12 years (SD 9.4), mean DAS28 score was 2.95 (SD 1.25) and median Health Assessment Questionnaire (HAQ) score 0.375 (range 0–1.875). Submaximal tests of aerobic capacity on bicycle ergometers were performed according to the Åstrand protocol and perceived exertion was rated on the Borg RPE scale.^{6–20} Data on the potential correlates pain (VAS, 0–100), fatigue (VAS, 0–100), general health perception (GHP, VAS, 0–100), lower extremity function (Timed Stands Test, TST, s), healthy physical activity levels (yes/no),

activity limitation (HAQ, 0–3), fear avoidance beliefs (Fear avoidance beliefs questionnaire, FABQ, 0–24), exercise self-efficacy (Exercise Self Efficacy Scale, ESES, 6–60), and depression (EQ5D, question # 5, 1–3) were collected. Generalised linear models (GLM) with normal log models were used to calculate each variable's correlation with the RPE. Correlates with p-value<0.10 were entered in a forward stepwise model.

Results: The correlation between RPE and working HR at the end of the aerobic capacity test was $r_s=0.15$ (p<0.05). Analysis using GLM identified general health perception, lower extremity function, activity limitation, depression, resting HR and working HR as correlates of RPE with p-value<0.10. A forward stepwise model including these variables, together with age and gender, identified lower extremity function (OR: 1.0044/s, p=0.0001), resting HR (OR: 0.9977/beat, p=0.0071) and working HR (OR: 1.0030/beat, p<0.0000) as correlates of RPE.

Conclusions: As expected, RPE correlated with working HR, but only weakly. Although our study participants were instructed to focus on perceived central exertion in their ratings, it seems that they were not able to distinguish that from peripheral exertion. Considering this bias in ratings, wearable HR monitors should be recommended to people with RA for accurate feedback on physical activity intensity.

REFERENCES:

- [1] Borg GA. Psychophysical bases of perceived exertion. *Med Sci Sports Exerc.* 1982;14:377–81.
- [2] Nordgren B, Fridén C, Demmelmaier I, Bergström G, Opava CH. Long-term health-enhancing physical activity in rheumatoid arthritis – the PARA 2010 study. Study protocol. *BMC Public Health* 2012;12:397.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6321

SAT0733-HPR DUTCH RECOMMENDATIONS FOR PHYSICAL THERAPY IN AXIAL SPONDYLOARTHRITIS (AXSPA)

S. van Weely¹, F. van der Giesen¹, F. van Gaalen², I. van der Horst-Bruinsma³, S. Ramiro², A. Weel⁴, N. Lopuhaa⁵, T. Vliet Vlieland¹. ¹Orthopaedics, Rehabilitation and Physical Therapy; ²Rheumatology, Leiden University Medical Center, Leiden; ³Rheumatology, VU University Medical Center, Amsterdam; ⁴Rheumatology, Maasstad Ziekenhuis, Rotterdam; ⁵Dutch Arthritis Foundation, Amsterdam, Netherlands

Background: According to the ASAS/EULAR recommendations, physical therapy (PT), especially exercise therapy, is an essential element within the management of axSpA.¹ In the Netherlands considerable variation in the delivery of PT was observed,² suggesting suboptimal care delivery. This practice variation is likely to be related to the lack of specific recommendations regarding referral, assessment, content, and monitoring of its effectiveness and safety.

Objectives: To develop practice recommendations on PT in axSpA.

Methods: A taskforce of 31 experts was responsible for the recommendations. It consisted of patients,² rheumatologists,⁷ physical therapists,¹³ policy makers,³ researchers² and representatives of patient organisations.⁴ These were based on scientific evidence, expert opinion and patient values and were formulated following a combination of literature review and three expert-group meetings. Clinical questions were formulated in the first expert-group meeting. Then, a systematic literature review was performed to answer the clinical questions. It focused on systematic reviews, meta-analyses and (inter)national guidelines recommendations and consensus statements published after 2010 in English or Dutch. When this approach did not yield sufficient information, relevant RCTs or other types of research designs addressing (one of) the clinical questions were selected. Subsequently, draft recommendations based on the literature, expert opinion and patient values were formulated and discussed in a second meeting. In the third expert group meeting the recommendations were finalised and the level of agreement was determined by a written voting (rating from 1 (total disagreement) to 10 (total agreement)). We defined agreement if at least 80% voted ≥8.

Results: In the first meeting 18 clinical questions were formulated. Six questions pertaining to the content and safety of PT were merged and integrated. In total 12 practice recommendations were formulated on indication,² referral,² assessment/monitoring,² treatment,⁵ reporting¹ and safety.² (Figure 1) Three recommendations were (partly) based on level 1 evidence (Dutch Evidence Based guidelines, EBRO); others were based on lower levels combined with the opinion of experts written in literature. Agreement was reached for 11 out of 12 recommendations. Mean levels of agreement were high and varied between 8.5–9.1.

Indication and referral	
1	Describes indications and reasons for referral to a PT
2	Describes the information that a referral to a PT should contain
Assessment and monitoring	
3	Describes selection of domains, personal and environmental factors that should be assessed at intake and monitoring
4	Describes recommended and optional measuring instruments in the PT assessment
Analysis, objectives, treatment plan, and treatment	
5	Describes on which factors the choice for the duration and form of a PT intervention should be based
6	Describes how a personalized plan should be made and which elements are included (information, education, supervised exercise therapy and planning)
7	Describes the intensity, duration and frequency of the exercise therapy and exercise plan, including monitoring
8	Describes when land or water-based exercise therapy is preferred.
9	Describes which interventions are not recommended in treatment.
Reporting	
10	Describes the information a report from a physiotherapist should contain to give insight in the treatment-effects
Safety	
11	Describes that consideration should be taken to certain comorbidities and axSpA specific aspects that can influence the daily functioning and the therapeutic process and what the contra-indications and PT modalities are
12	Describes information relevant to patients in relation to an increased fracture risk

Abstract SAT0733HPR – Figure 1. Short description of the content of the Dutch recommendations for physical therapy in axial Spondyloarthritis (axSpA)

Conclusions: Using a standardised process of professional guideline development, 12 practice recommendations for PT management of patients with axSpA were developed. They can guide clinicians and physiotherapists dealing with patients with axSpA, ultimately leading to a delivery of a better care. Next steps are the ratification by relevant professional societies as well as dissemination and implementation.

REFERENCES:

- [1] Van der Heijde D, et al. 2016 update of the ASAS-EULAR management recommendations for axial spondyloarthritis. *Ann Rheum Dis* 2017;76(6):978–991.
- [2] Van der Giesen F, et al. Content and supervision of group exercise therapy (GET) for axial spondyloarthritis (axSpA) in the Netherlands; a nation wide survey. *Ann Rheum Dis* 2017;76(2):1479.

Acknowledgements: This study was Funded by the Dutch Arthritis Foundation

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5832

SAT0734-HPR CORRELATES OF PAIN AND PREDICTORS OF PAIN RELIEF IN A CONTROLLED RA STUDY IN INDIAN PATIENTS

T. Kianifard¹, M. Saluja², S. Samukaddam³, A. Chopra². ¹Rheumatology Research, Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic Of; ²rheumatology; ³Biostatistics, CENTER FOR RHEUMATIC DISEASES, Pune, India

Background: Potassium (K) enriched vegetarian diet (PEVT) significantly reduced pain (primary hypothesis and efficacy) compared to ad libitum diet in RA patients on standard drugs. We had earlier validated Indian version of RA Pain Scale/RAPS. EULAR 2014

Objectives: To determine correlates of pain (VAS) and RAPS and predictors of 'pain relief' in RA in a dietary intervention study

Methods: In the primary study, 172 consenting symptomatic patients (≥ 4 cms pain VAS) were randomised into a 3 arm 16 week study [2 active PEVT arms, 1 control routine diet] with ongoing background medication [72% methotrexate, 60% prednisolone]; 155 patients completed study. Evaluation included ACR core set and other measures (plus dietary) and RAPS (4 domains- physiological, affective, sensory discriminative, cognitive; 24 questions, score 0–144). The study (80% power, $\alpha < 0.05$) sample size was based on improvement in pain VAS (0–10 cms, with no pain at 0). Reduction in pain VAS of at least 1 cm on VAS was considered 'responder'. A Pearson correlation matrix was computed. A linear logistic regression model was used (good fit after 5 iterations). The dependent variable was number of 'respondents' (pain). 28 independent variables included clinical (+patient functional), laboratory (+steroid assay), drug use and dietary analytics

(+micronutrients) at baseline. From the latter, 13 qualified variables (a priori significance) were run in a forward stepwise model.

Results: Data below shows significant correlation of pain measures ($p < 0.05$). Other measures with significant correlation ≥ 0.3 were: patient global assess-DAS 28, C-reactive protein (CRP)-Erythrocyte Sed rate (ESR), Haemoglobin-ESR, health assessment questionnaire score (HAQ)-medical outcome short form 36 physical (SF 36-phy), DAS 28-painful tender joint count, HAQ-general health on 100 mm VAS (GH). Significant ($p < 0.05$) predictors in the first regression run were allocation to K intervention, female gender, and disease duration (less than 5 years). In the subsequent run, the significant predictors [Odds Ratio, 95% confidence interval] were: K allocation arm (1.13, 5.27), disease duration less 5 years (1.98, 9.67), female gender ($p = 0.01$), serum K (1.44, 6.29), body mass index (0.99, 4.76)

Correlates of RAPS: Swollen joint count (0.16), general health assessment 100 mm VAS (–0.18), morning stiffness (0.16), SF 36 phy (–0.35), SF36-mental (–0.21), serum potassium/K (0.16), C-reactive protein (0.25)

Correlates of PAIN VAS: Painful joint count (0.16), general health assessment 100 mm VAS (–0.43), C-reactive protein (0.2), dietary K (–0.22)

Conclusions: Despite a complex questionnaire, RAPS shared significant correlates with the popular and seemingly simplistic pain VAS. The association between dietary K and pain VAS was inverse and modest ($p < 0.01$) and consistent with the primary study hypothesis. The predictors of pain response included patient 'allocation to the PEVD' in support of the efficacy result in the primary study.

REFERENCES:

- [1] Kainifard T, et al. (Oral Potassium Reduces Pain in RA) *Arthritis Rheumatol* 2015;67(suppl 10)
- [2] Anderson LD (RAPS). *Arthritis Care Res* 2001;45:317–323.

Acknowledgements: Arthritis Research Care Foundation Centre for Rheumatic Diseases Pune (India) for education research grant and all the patient participants and colleagues

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2950

SAT0735-HPR SEX DIFFERENCES IN ILLNESS PERCEPTIONS AND SELF-MANAGEMENT IN PATIENTS WITH GOUT

U. Bergsten¹, M. Dehlin², E. Klingberg², A. Landgren², L. Jacobsson². ¹Rand department, Region of Halland, Halmstad; ²Department of Rheumatology and Inflammation Research, University of Gothenburg, Gothenburg, Sweden

Background: Illness perceptions are important and can influence all aspects of management in chronic diseases. Differences in gender aspects of illness perceptions have been shown for other diseases, but have scarcely been examined in gout. Lifestyle and dietary adjustments are principal components of self-management of gout.

Objectives: to examine illness perception, self-management strategies and advice from healthcare professionals in Swedish patients with gout by sex.

Methods: All patients above 18 with diagnosis of gout were identified from 12 primary centres (serving a population of 1 000 000 inhabitants) and one rheumatology clinic within western Sweden. Patients were sent a questionnaire including gout characteristics, demographics, illness perception questionnaire (B-IPQ), questions about diet, alcohol and advice from health care professionals. Age-adjusted differences between sexes were analysed in logistic regression models

Results: Of 1589 individuals with a gout diagnosis, 868 (69.3%) responded to the survey. The proportion of men was 80%. Mean age was 70 years for men and 75 years for women. Women reported modest but significant worse illness perception with regard to severity of disease, identity, concerns and emotional response (see table 1). Women had made more dietary food changes, whereas there was no difference regarding changes in alcohol reduction. Advice from health personal regarding dietary changes had more often been given to men (53% vs 22%) and among obese patients (BMI > 30 kg/m²) more men (65% vs 47%) had been given advice about weight reduction.

Conclusions: Men with gout perceive their illness as less serious and are less likely to make dietary adjustments compared to women, despite been given more lifestyle advice from health care personal. There may be a need to focus more on how advances regarding disease and life style changes are given from a gender perspective for achieving optimal results.

Disclosure of Interest: None declared