THU0573

YOGA LEADS TO SUSTAINED IMPROVEMENT IN FATIGUE AND MOOD IN RHEUMATOID ARTHRITIS: PRELIMINARY RESULTS OF A RANDOMIZED CONTROLLED TRIAL

S. Puksic¹, J. Mitrovic^{1,2}, M. I. Culo¹, M. Zivkovic³, B. Orehovec³, M. Lucijanic⁴, D. Bobek⁵, J. Morovic-Vergles^{1,2}. ¹University Hospital Dubrava, Clinical Immunology, Rheumatology and Allergology, Zagreb, Croatia; ²Univ. of Zagreb, School of Medicine, Zagreb, Croatia; ³University Hospital Dubrava, Clin. Dep. of Laboratory Diagnostics, Zagreb, Croatia; ⁴University Hospital Dubrava, Hematology, Zagreb, Croatia; ⁵University Hospital Dubrava, Physical Med. and Rehabilitation with Rheumatology, Zagreb, Croatia

Background: Rheumatoid arthritis (RA) patients experience reduced health-related quality of life (HRQOL). Previous studies suggest that yoga, a mind-body practice, can improve physical and mental health but it has not been extensively studied in RA.

Objectives: To investigate the effect of yoga on HRQOL and secondary on fatigue, anxiety, depression and disease activity in RA patients

Methods: 43 RA patients (mean (SD) age 55 (10) years, median (IQR) disease duration 5 (3,8) years, 93% female), stable on standard pharmacological treatment and DAS28CRP < 5.1 were randomly assigned to 12 weeks yoga intervention (2x/week 90 min; n=22) or arthritis-related educational lectures control (1x/week 60 min; n=21). Yoga based on „Yoga in daily life system“ included asanas, relaxation, pranayama and meditation. Study evaluations at baseline, post-intervention and 3-month follow-up included The Short Form-36 (SF-36) scores for Physical Component Summary (PCS) and Mental Component Summary (MCS), Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F), Hospital Anxiety and Depression scale (HADS) and Disease Activity Score-28CRP (DAS28CRP) questionnaires. Data were presented as change from baseline to each time point. Between group differences were analyzed using the t-test for normally and Mann-Whitney U test for non-normally distributed variables. P values <0.05 were considered statistically significant.

Results: 35 patients (17 = intervention, 18 = control group) completed the trial period. Significant improvement in FACIT-F (p=0.013), HADS anxiety (p=0.047) and HADS depression (p=0.004) was found in yoga group compared to control at post-intervention and maintained at follow-up (p=0.025, p=0.02 and p=0.045, respectively). There was no significant difference found between groups for SF-36 MCS, PCS and DAS28CRP at all time points (all p>0.05). No serious adverse events were observed during trial period.

Conclusion: Although no change in SF-36 scores and disease activity was observed, yoga practice produced significant and sustained improvement in fatigue and mood which strongly account for decreased life quality in RA. Despite limitations our findings suggest that yoga may be of benefit in management of RA patients.

Table. Changes in outcomes

N= 37 (postintervention)			N= 35 (follow-up)		
Variables	Baseline mean (SD)	Change from baseline (95%CI)	Difference between groups (95%CI, p-value)	Change from baseline (95%CI)	Difference between groups (95%CI, p-value)
FACIT-F (0-52)	Yoga 33.89 (10.77)	4.18 (-0.26,8.61)	6.66 (1.53,11.78) p=0.013	3.29 (-1.23,7.82)	6.63 (0.85,12.4) p=0.025
	Control 35.37 (9.3)	-2.17 (-5.58,1.25)		-3.33 (-7.27,0.61)	
HADS-A (0-21)	Yoga 7.39 (3.72)	-1.94 (-3.28,-0.6)	-1.83 (-3.64,-0.024) p=0.047	-2.24 (-3.63,-0.84)	-2.4 (-4.4,-0.04) p=0.02
	Control 6.89 (2.86)	0.056 (-1.39,1.51)		0.17 (-1.38,1.71)	
HADS-D (0-21)	Yoga 5.11 (3.03)	-1.06 (-1.92,-0.2)	-1.73 (-2.88,-0.58) p=0.004	-0.2 (-1.1,0.63)	-1.18 (-2.33,-0.03) p=0.045
	Control 5.0 (1.82)	0.83 (-0.06,1.72)		0.94 (0.12,1.77)	
SF-36:MCS (0-100)	Yoga 49.49 (11.99)	2.97 (-4.15,10.09)	3.86 (-4.66,12.33) p=0.366	1.25 (-3.62,6.12)	1.7 (-5.09,8.49) p=0.618
	Control 49.71 (8.99)	-1.59 (-7.51,4.33)		-0.45 (-5.56,4.65)	
SF-36:PCS (0-100)	Yoga 52.57 (10.11)	0.44 (-3.13,4.02)	1.61 (-3.31,6.53) p=0.511	-1.54 (-5.44,2.35)	-1.9 (-6.98,3.18) p=0.453
	Control 48.30 (9.76)	-1.16 (-4.81,2.48)		0.35 (-3.21,3.92)	
DAS28CRP	Yoga 2.32 (0.81)	-0.0024 (-0.42,0.42)	0.093 (-0.44,0.63) p=0.724	0.11 (-0.43,0.66)	0.66 (0.02,1.3) p=0.092
	Control 2.91 (0.84)	-0.096 (-0.45,0.26)		-0.54 (-0.92,-0.17)	

Disclosure of Interests: Silva Puksic: None declared, Josko Mitrovic: None declared, Melanie-Ivana Culo: None declared, Marcela Zivkovic: None declared, Biserka Orehovec: None declared, Marko Lucijanic: None declared, Dubravka

Bobek: None declared, Jadranka Morovic-Vergles Speakers bureau: Abbvie., Roche, MSD, Eli Lilly, Pfizer, Mylan, Amgen, Fresenius Kabi
DOI: 10.1136/annrheumdis-2020-eular.1876

THU0574

PHYSICAL ACTIVITY IN PEOPLE WITH AXIAL SPONDYLOARTHRITIS AND THE IMPACT OF ATTITUDE, BARRIERS AND FACILITATORS.

J. O. Rasmussen^{1,2}, W. Fick², J. Primdahl^{3,4,5}, A. Bremander^{3,6}. ¹Danish Hospital for Rheumatic Diseases, Odense N, Denmark; ²Danish Patient Association for Spondyloarthritis, Sonderborg, Denmark; ³Danish Hospital for Rheumatic Diseases, Sonderborg, Denmark; ⁴University of Southern Denmark, Department of Regional Health Research, Odense, Denmark; ⁵University Hospital of Southern Denmark, Hospital of Southern Jutland, Aabenraa, Denmark; ⁶University of Southern Denmark, Department of Regional Health Research, Odense, Denmark

Background: Barriers such as high disease activity, fatigue, pain, stiffness, physical exertion and lack of time all have a negative impact on physical activity level in people with axial Spondyloarthritis (axSpA), while more time is a facilitator (1, 2). In addition, an intrinsic drive to exercise is an important motivator, guided by personal interest and enjoyment in exercise (1). There is a need for a better understanding of the impact of barriers, facilitators and attitudes on level of physical activity.

Objectives: To study the association between self-reported level of physical activity and self-perceived health, attitudes, barriers and facilitators to physical activity in people with axSpA.

Methods: In 2018, members with axSpA from the Danish Patient Association for Spondyloarthritis were invited to participate in an on-line survey. The questionnaire included diagnosis, socio-demographics, self-perceived health (poor, fair or good), level of physical activity (≤ 1 day/week, 2-3 days/week or 4-7 days/week) overall attitude (I do not care and I do not know, it's ok or I like physical activity), barriers and facilitators toward physical activity (range 8-56, low to high disagreement). A logistic regression analysis was applied to study associations between level of physical activity (dependent variable) and attitudes, barriers, facilitators and self-perceived health (independent variables).

Results: 445/972 members (46%) completed the questionnaire. Median age was 56 years (range 22-85), 241 (54%) were men. 23% were physically active for at least 30 minutes on a moderate intensity level ≤ 1 day/week, 36% 2-3 days/week and 41% 4-7 days/week. Responders who were physically active ≥ 2 days/week had more positive attitudes to physical activity (p<0.001), disagreed more often to suggested barriers (p<0.001), and had better self-perceived health (p<0.003) compared with those who reported a low physical activity level (≤ 1 day/week). In the regression analysis, positive attitudes (OR 14.21, 95%CI 3.34 - 60.53) and a higher disagreement with barriers for physical activity (OR 1.12, 95%CI 1.07 - 1.17) were associated with high level of physical activity.

Conclusion: The overall attitude and experienced barriers towards physical activity have a strong impact on the level of physical activity in people with axSpA. To support lifestyle changes, health professionals need to discuss the impact of barriers and attitudes to physical activity with their clients.

References:

- [1] Brophy S et al (2013). The effect of physical activity and motivation on function in ankylosing spondylitis: A cohort study. *Semin Arthritis Rheum* 42: 619-626.
- [2] Fongen C et al. (2015). Barriers and Facilitators for Being Physically Active in Patients with Ankylosing Spondylitis: A Cross-sectional Comparative Study. *Musc. Care* 13: 76-83.

Figure 1. Percentage agreement with barriers and facilitators for physical activity. PA: Physical activity, PT: Physiotherapist

Disclosure of Interests: Jens Ole Rasmussen: None declared, Willy Fick: None declared, Jette Primdahl Speakers bureau: BMS and Pfizer, Ann Bremander: None declared

DOI: 10.1136/annrheumdis-2020-eular.2917

THU0575 THE EFFECT OF PREOPERATIVE PHYSICAL ACTIVITY ON KNEE AND HIP ARTHROPLASTY OUTCOME IN PATIENTS WITH OSTEOARTHRITIS

E. Vandelli¹, C. Duflos², S. Akouete², F. Guillemin³, A. C. Rat⁴, Y. M. Pers⁵ on behalf of the KHOALA Cohort Study. ¹University Hospital of Montpellier, Clinical Immunology and Osteoarticular Diseases Therapeutic Unit, Montpellier, France; ²University Hospital of Montpellier, Clinical Research and Epidemiology Unit, Montpellier, France; ³CHRU Nancy, Inserm, Université de Lorraine, CIC 1433 Clinical Epidemiology, Vandoeuvre-les-Nancy, France; ⁴Université de Caen Normandie, Université de Lorraine, CHU Caen, Caen, France; ⁵IRMB, University of Montpellier, Inserm U1183, Montpellier, France

Background: Joint replacement is a therapeutic option increasingly widespread among osteoarthritis (OA) patients. Besides improving operating techniques and postoperative management, it is important to pursue the best preoperative conditions in order to achieve the desired result. As physical activity (PA) potentially acts on the preoperative predictors, knowing the effect of leisure and occupational PA should be of great interest to obtain a positive outcome.

Objectives: To investigate the influence of preoperative PA on the clinical outcomes of total hip arthroplasty (THA) and total knee arthroplasty (TKA) in OA patients.

Methods: Data from the Knee and Hip OsteoArthritis Long-term Assessment (KHOALA) cohort (1), a multi-regional French cohort of 878 patients with symptomatic hip and/or knee OA, were analysed. We included in our study patients undergoing THA or TKA during a 7-year-follow-up period. The level of total and leisure-time preoperative PA was measured with the Modifiable Activity Questionnaire (MAQ). Outcomes were measured one year after surgery. For the primary endpoint, quality of life (QoL) was measured with the OsteoArthritis Knee and Hip Quality Of Life questionnaire (OAKHQOL). For secondary endpoints, QoL was measured with Short Form 36 (SF-36), pain with the Visual Analogue Scale (VAS), function with the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and with walking distance. The population characteristics were described using frequency or mean and standard deviation (SD), depending on the distribution of the variable. Association between exposures and outcomes was calculated with a multivariate linear analysis with backward selection, adjusting for confounders (age, sex, body mass index, site of joint replacement, polyarticular OA, OA duration, comorbidities, radiological grade of OA, inclusion centre, rehabilitation after surgery, previous joint issues, instruction level). A p-value <0.05 was set as statistically significant.

Results: 150 patients were included. 58.7% underwent TKA and 41.3% THA. The mean age at the time of surgery was 66.6 years (± 7.7 SD). The majority of patients were female (75%), overweight (mean BMI 29.63 kg/m², ± 5.5 SD) and had polyarticular OA (60%). 53% of patients met the World Health Organization recommendations on PA before surgery. For the primary endpoint, a high preoperative total PA was associated with a better relationship with the partner ($\beta = 0.55$, $p = 0.02$) one year after surgery. As for secondary endpoints, a high two-year preoperative total PA was associated with an impaired SF-36 Mental Component Summary score ($\beta = -0.87$, $p = 0.02$), but a longer walking distance ($\beta = 442.81$, $p < 0.01$). Leisure-time PA also showed a positive impact on walking distance ($\beta = 76.25$, $p = 0.02$), but a negative one on social functioning in SF-36 ($\beta = -0.47$, $p = 0.01$). No statistically significant association between preoperative PA and pain nor WOMAC was found.

Conclusion: In this cohort study, the preoperative level of PA demonstrated a heterogeneous effect on the various aspects of QoL one year after THA and TKA in OA patients. Preoperative PA was directly associated with gain of function, measured as walking distance, after surgery. Considering the increasing prevalence of OA and the crucial role of PA on health, further studies on this relevant topic are needed.

References:

- Guillemin F, Rat A-C, Roux CH, Fautrel B, Mazieres B, Chevalier X, et al. The KHOALA cohort of knee and hip osteoarthritis in France. *Joint Bone Spine*. 2012 Dec 1;79(6):597–603.

Disclosure of Interests: Enrica Vandelli: None declared, Claire Duflos: None declared, Sandrine Akouete: None declared, Francis Guillemin Grant/research support from: Francis Guillemin received a grant from Expanscience paid to his institution., Anne-Christine Rat: None declared, Yves-Marie Pers: None declared

DOI: 10.1136/annrheumdis-2020-eular.2040

THURSDAY, 04 JUNE 2020

Education

THU0576 EMPOWERING PEOPLE WITH RHEUMATIC AND MUSCULOSKELETAL DISEASES TO BE AT THE HEART OF MEDICAL EDUCATION: A EULAR SCHOOL OF RHEUMATOLOGY INITIATIVE

S. Grealis¹, A. Alunno², M. Bernardy³, V. Romero Pazos⁴, T. P. M. Vliet Vlieland⁵, C. Haines⁶, D. Wiek³. ¹Arthritis Ireland, Dublin, Ireland; ²Rheumatology Unit, Perugia, Italy; ³Deutsche Rheuma Liga, Bonn, Germany; ⁴LIRE, Madrid, Spain; ⁵LUMC, Leiden, Netherlands; ⁶King's College, London, United Kingdom

Background: The earliest examples of active patient involvement in teaching are interventions in which the patient was teaching students how to conduct physical examinations. Over the last two decades, educators have used the expertise of patients to enrich the education of undergraduate physicians and health professionals (HP) in several ways, mainly asking people to outline their own stories. Early patient involvement also aims to sensitise students to pursue a holistic approach and ultimately to build a trustful physician-patient relationship. Most studies report that high patient involvement brings benefits to both learners and patients. Learners report higher satisfaction. Patients report raised self-esteem and empowerment, new insights into their problems and deeper understanding of the physician-patient relationship.

Objectives: To develop a novel educational framework within the EULAR School of Rheumatology for people with rheumatic and musculoskeletal diseases (RMDs) who are willing to be involved in teaching undergraduate physicians and HPs (Patient Education Partners, PEPs).

Methods: A multidisciplinary working group including people with RMDs, 1 Rheumatologist, 1 HP in rheumatology and 1 educationalist was established. The project was developed through a questionnaire launched in May 2019, to patient associations across Europe, 2 face to face meetings and online teleconferences.

Results: Patient associations from 23 European countries responded to the questionnaire and in 10 of them (43%), there have been programmes running for up to 31 years which involve patients with RMDs in undergraduate education. To some extent, 485 people with RMDs have been trained over the years across Europe. However, there are different country and disease-specific types of training and a lack of standardised training for patients involved in these programs. The patient associations from countries that do not have the programme would be interested in taking part, if such initiative were to be developed. The topics that people would like to cover when teaching medical and other health professions students are: disease specific factors, doctor-patient communication, personal history and physical examination, the importance of education and work to the individual, the importance of disease self-management. A subsequent mapping of European countries was undertaken to identify best practice examples of existing programmes: Germany, Denmark, Belgium, Ireland and the UK were included. From these foundations, we developed a new on-line Course, to equip patients with a basic medical knowledge about their disease and effective communication strategies.

Conclusion: We established a European framework to train people with RMDs who were willing to be involved in teaching undergraduate physicians and HPs. This will allow them to gain confidence and effective communication skills to share their lived experience and become PEPs. The content of the course is currently being developed and all EULAR pillars are involved. Participation in this training course, particularly by people from countries that do not yet engage patients in undergraduate education, may facilitate the implementation of such initiatives, and ultimately improve the training of physicians and HPs across Europe.

References:

- Wykurz G et al. *BMJ* 2002;325:818
- Walters K et al. *BMJ* 2003;326:740

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4578

THU0577 INFLUENCE OF THE ROUTE OF ADMINISTRATION ON SAFETY AND ADHERENCE PRACTICES OF RHEUMATOID PATIENTS TREATED BY JAK-INHIBITORS AND OTHER DMARDS. AN ETHNOGRAPHIC STUDY FOR AN APP-BASED EDUCATION TOOL.

G. Montagu¹, S. Gleizes², T. Pham³, J. Sellam⁴, C. Beauvais⁵. ¹Unknowns, Strategic and Innovation Consulting, Sociology and Research Department, Paris, France; ²Unknowns, Strategic and Innovation Consulting, Sociology and Research Department, Paris, France; ³Hôpital Sainte-Marguerite, AP-HM, Aix-Marseille Université, Rheumatology Department, Marseille, France; ⁴Hôpital Saint-Antoine, AP-HP, Sorbonne University, Rheumatology Department, Paris, France; ⁵Hôpital Saint-Antoine, AP-HP, Sorbonne University, Rheumatology Department, Paris, France