FRI0641-HPR

INTERSTITIAL LUNG DISEASE AS INITIAL MANIFESTATION OF SYSTEMIC AUTOIMMUNE RHEUMATIC DISEASES IN A MONOCENTRIC COHORT: THE IMPORTANCE OF A MULTIDISCIPLINARY APPROACH

F. Bozzao¹, P. Tomietto², I. Prearo³, S. M. G. Pironello⁴, O. Magazzino⁵, M. Kodric⁶, R. Della Porta⁶, R. Cifaldi⁶, E. Barattella⁷, F. Fischetti², M. Confalonieri⁶, B. Fabris². ¹University of Trieste, Internal Medicine, Trieste, Italy; ²Azienda Sanitaria Universitaria Giuliano Isontina, Internal Medicine, Trieste, Italy; ³University Hospital LMU Munich, Medical Clinic and Policlinic IV, Munich, Germany; ⁴Azienda Ospedaliera Cannizzaro, Emergency Department, Catania, Italy; ⁵University of Trieste, Internal Medicine, Trieste, Italy; ⁶Azienda Sanitaria Universitaria Giuliano Isontina, Cardiothoracovascular Department, Trieste, Italy; ⁷Azienda Sanitaria Universitaria Giuliano Isontina, Radiology Department, Trieste, Italy

Background: Interstitial lung disease (ILD) can be the first manifestation of connective tissue disease (CTD) and rheumatoid arthritis (RA). Pulmonologists are usually the first referral in these patients.

Objectives: To determine: 1) the prevalence of ILD as initial manifestation of CTD or RA 2) clinical characteristics of such patients.

Methods: From a database of consecutive patients with CTD or RA referred to our academic hospital from 2009 and 2017, we selected all the patients with ILD as initial manifestation of the disease. Periodic multidisciplinary evaluations were performed during a median follow-up of 48 (35-50) months.

Results: 1) Fifty-four of the 427 patients with CTD or RA (12.6%) had ILD as initial manifestation (mean age: 63.9±12.9 yrs, F/M ratio: 20/34). Autoimmune myositis was diagnosed in 16/54 patients (29.6%), systemic sclerosis in 11 patients (20.4%), RA in 9 patients (16.7%), Sjogren syndrome in 9 patients (16.7%) and SLE in 3 patients (5.5%). Six patients remained classified as IPAF (11.1%). Among the Rheumatology patients we followed-up in the same period, autoimmune myositis had the highest prevalence of ILD as initial manifestation (63.6%), followed by Sjogren syndrome (20.5%), systemic sclerosis (20.0%), RA (3.4%), and SLE (3.3%). 2) Patients with initial ILD were all firstly evaluated by the Pulmonologist and the main reasons for Rheumatology referral were positivity for one or more autoantibodies (57.4%), mainly ANA≥1:320, and joint pain (29.6%). Thirty-six patients (66.7%) received steroid and/or immunosuppressive therapy in the six months before the first Rheumatology visit to relieve respiratory symptoms. Twenty of these patients (58.8%) had rheumatic manifestations during steroid tapering. ILD CT patterns were NSIP (25 patients, 52.1%), UIP (18 patients, 33.4%), and organizing pneumonia (5 patients, 9.3%). In four patients (4.5%), autoantibodies became positive during the follow-up. The final diagnosis of CTD- or RA-ILD was made after a median period of 16.5 (6-39) months from the clinical onset. At the time of diagnosis, average FVC was 90.4±18.7% of predicted, DLCO 55.4±20.2% and the median GAP index was 3 (2-3). During the median follow-up of 48 months, eight patients (14.8%) had a decline in DLCO of ≥ 15% predicted and/or a decline in FVC of ≥ 10% despite immunosuppressive drugs. Nine patients (17%) died and six of these patients (11.1%) for causes related to ILD.

Conclusion: In our study population, the prevalence of ILD as initial manifestation of CTD or RA was 12.6%. Autoimmune myositis, systemic sclerosis and Sjogren syndrome were the most frequent diagnosis. As our data confirmed, ILD is a major cause of death in patients with systemic autoimmune diseases and can progress despite immunosuppression [1]. Furthermore, clinical features may become evident even months after the disease onset. A multidisciplinary evaluation is therefore essential, not only at the time of diagnosis but also during the follow-up [2].

References:

- [1] A. Fischer *et al.* Progressive fibrosing interstitial lung disease associated with systemic autoimmune diseases. *Clin Rheum* (2019); 38:2673-81
- [2] F. Furini, *et al.* The role of the Multidisciplinary Evaluation of Interstitial Lung Diseases: Systematic Literature Review of the Current Evidence and Future Perspectives. *Front Med* (2019); 6:246

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4645

FRI0642-HPR

BARRIERS AND FACILITATORS FOR PHYSICAL ACTIVITY ARE MAINLY RELATED TO PSYCHOLOGICAL ISSUES IN INFLAMMATORY ARTHRITIS – A MIXED-METHODS STUDY OF 66 PATIENTS IN FRANCE.

T. Davigerne¹, R. H. Moe², B. Fautrel¹, L. Gossec¹. ¹Sorbonne University – Assistance Publique Hopitaux de Paris, Paris, France; ²Dept. of Rheumatology, Diakonhjemmet Hospital, Oslo, Norway

Background: Patients with inflammatory arthritis (IA) like (ankylosing spondylitis (AS), rheumatoid arthritis (RA), and psoriatic arthritis (PsA) are more prone to physical inactivity but derive specific benefits from regular physical activity (PA)

(1). Barriers and facilitators to PA are key elements that have not yet been well described.

Objectives: To assess if barriers and facilitators for PA in patients with IA are mostly related to disease, psychological, social or environmental factors.

Methods: A list of the most important barriers and facilitators was derived from a systematic review of barriers and facilitators to PA in rheumatoid arthritis (2). This list was assessed for face validity by 11 experts from Rheumatology or physiotherapy then tested by 10 patients through structured interview.

The list of barriers and facilitators was completed in a binary way: "barriers or facilitators are relevant to me" yes or no, for 66 patients in a monocentric, cross-sectional study. Then, patients assessed the level of each barrier or facilitator on a 0-10 scale. Statistics were descriptive. There was no imputation of missing data.

Results: The study included 66 patients (27 axial spondyloarthritis, 26 rheumatoid arthritis, 13 psoriatic arthritis), mean age 52.0 (standard deviation (SD) 16.6) years, mean disease duration 14.3 (SD 11.7) years, 53% women. Disease activity was moderate (mean DAS28 2.1 (SD 1.1), mean BASDAI 2.8 (SD 1.4)), and 75.4% received a biologic. The main factors described by patients were related to the knowledge of the benefits of PA and symptoms (table 1). Psychological factors were more reported and social factors less reported as influential for PA.

Table 1. Barriers and facilitators for physical activity reported by patients with inflammatory arthritis.

Barriers or facilitators	Categories	Modifiable	N (%) reporting this barrier or facilitator	Level of patients reporting this item (0-10) (mean (SD))
Knowledge of benefits of physical activity for health	Psych	Yes	49 (78)	6.6
Knowledge of benefits of physical activity for mood	Psych	Yes	47 (75)	6.8 (3.4)
Level of symptoms (pain, fatigue, lack of mobility)	Phy	Yes	44 (69)	5.7 (2.8)
External reminders (eg: from health professionals, calendars...)	Soc	Yes	36 (57)	6.2 (3.1)
Presence or absence of activity facilities (ex: green area for walking, gym ...)	Evmt	No	34 (56)	6.3 (3.7)
Lack of motivation	Psych	Yes	34 (55)	5.7 (3.2)
Weather conditions	Evmt	No	33 (52)	5.7 (3.2)
Confidence on how to exercise safely	Psych	Yes	31 (49)	6.0 (2.6)
Contact and proximity with others during physical activity	Soc	No	29 (47)	6.1 (3.7)
Presence or absence of support from others (friends, family)	Soc	No	26 (42)	6.5 (3.9)
Lack of time	Evmt	No	35 (40)	5.4 (3.4)
Presence or absence of support and/or advice from healthcare professionals	Soc	Yes	25 (40)	6.0 (3.7)
A belief that physical activity will make symptoms worse	Psych	Yes	17 (27)	4.8 (3.3)
Lack of knowledge on which exercises to do and how much	Psych	Yes	17 (27)	4.7 (3.0)

Psych = psychological, Evmt = environmental, Phy = physical, Soc = social

Conclusion: The main factors that influence PA in patients with IA were mostly related to psychological aspects, and could be modifiable. The role of health professionals supporting patient PA is key. Interventions should be further explored to meet these important barriers and facilitators.

References:

- [1] O'Dwyer T, Physical activity guidelines: is the message getting through to adults with rheumatic conditions? *Rheumatol U K*. 2014
- [2] Davigerne T, Thu0716-Hpr Major Barriers and Facilitators to Physical Activity in Rheumatoid Arthritis Are Related to Physical and Psychological Health, Setting and Social Environmental Factors: A Systematic Literature Review. *Ann Rheum Dis*. 2019

Disclosure of Interests: Thomas Davigerne: None declared, Rikke Helene Moe: None declared, Bruno Fautrel Grant/research support from: AbbVie, Lilly, MSD, Pfizer, Consultant of: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Lilly, Janssen, Medac MSD France, Nordic Pharma, Novartis, Pfizer, Roche, Sanofi Aventis, SOBI and UCB, Laure Gossec Grant/research support from: Lilly, Mylan, Pfizer, Sandoz, Consultant of: AbbVie, Amgen, Biogen, Celgene, Janssen, Lilly, Novartis, Pfizer, Sandoz, Sanofi-Aventis, UCB

DOI: 10.1136/annrheumdis-2020-eular.3078

FRI0643-HPR

CARDIOVASCULAR DISEASE AMONG PATIENTS WITH RHEUMATOID ARTHRITIS COMPARED WITH THOSE WITH OSTEOARTHRITIS

F. Wang¹, B. Mukerji¹, R. Markert², V. Mukerji³. ¹Dayton Veterans Administration Medical Center, Dayton, United States of America; ²Wright State University,

Dayton, United States of America;³Dayton Veteran Administration Medical Center, Cardiology, Dayton, United States of America

Background: Rheumatoid arthritis (RA) is a chronic immune mediated systemic disease known to affect multiple organs. It is known that cardiovascular disease accounts for nearly half the mortality among RA patients^{1,2,3}. Osteoarthritis (OA), on the other hand, is not an inflammatory arthritis. No prior study has compared the prevalence of cardiovascular disease (CVD) among these two groups of patients.

Objectives: The purpose of this study was to compare the prevalence of CVD among U.S. veterans with RA versus those with OA.

Methods: The study was conducted in a metropolitan Veterans Affairs Medical Center in the U.S. Information was collected from 125 consecutive patients with RA and 125 consecutive patients with OA as they presented to the clinic. Patient characteristics were noted as well as the presence of CVD and certain subgroups: Cardiac arrhythmias⁴, coronary artery disease (CAD), congestive heart failure (CHF), cerebrovascular accident (CVA), abdominal aortic aneurysm (AAA), peripheral vascular disease (PVD), deep vein thrombosis (DVT), pulmonary embolism (PE), or any other form of embolism. The chi square test and the mann-whitney test were used for statistical analyses.

Results: Patient characteristics did not differ between the two groups for age, race, smoking status, or for the presence of hypertension or diabetes. There were more women in the RA group. The OA group had a higher BMI and a higher prevalence of hyperlipidemia. RA patients compared to OA patients had a higher incidence of CVD as a whole (60% vs. 42%, $p < 0.004$) and of cardiac arrhythmias (33.6% vs. 13.6%, $p = 0.001$). There was no difference between the 2 groups for the incidence of CAD, CHF, CVA, AAA, PVD or DVT/PE. RA seropositive and seronegative patients did not differ in the prevalence of CVD. RA duration was not related to the increased prevalence of CVD. Among the cardiac arrhythmias, patients with RA had a higher prevalence of atrial fibrillation (19.2% vs. 8.8%, $p < 0.03$), and arrhythmias requiring pacemaker or defibrillator implant (12.8% vs. 4.0%, $p < 0.02$).

Conclusion: The findings of this study demonstrate that our patients with RA have a statistically higher prevalence of CVD compared to OA patients. Among the subgroups, RA patients had a higher prevalence of cardiac arrhythmias, specifically atrial fibrillation and arrhythmias requiring pacemaker or defibrillator implant.

References:

- [1] England BR, et al. Cause-specific mortality in male US veterans with rheumatoid arthritis. *Arthritis Care Res (Hoboken)*; 68: 36-45 2016
- [2] Avina-Zubieta JA, et al. Risk of incident cardiovascular events in patients with rheumatoid arthritis: a meta-analysis of observational studies. *Ann Rheum Dis* 2012; 71: 1524-1529.
- [3] Maradit-Kremers H et al. Increased unrecognized coronary heart disease and sudden deaths in rheumatoid arthritis: A population-based cohort study. *Arthritis Rheum*. 2005; 52: 402-411
- [4] Lazzarini PE, Capechi L et al. Systemic Inflammation and arrhythmic risk: lessons from rheumatoid arthritis. *European Heart Journal*; 2017, 38: 1717-1727

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.473

FRIDAY, 05 JUNE 2020

HPR Interventions (educational, physical, social and psychological)

FRI0644-HPR PATIENT EDUCATION AND BASIC BODY AWARENESS THERAPY VERSUS PATIENT EDUCATION ONLY IN PATIENTS WITH HIP OSTEOARTHRITIS: A RANDOMIZED CONTROLLED TRIAL.

A. L. Olsen^{1,2}, L. H. Magnussen³, L. H. Skjaerven³, J. Assmus⁴, M. A. Sundal³, O. Furnes⁵, G. Hallan⁶, L. I. Strand¹. ¹University of Bergen, Department of Global Public Health and Primary Care, Bergen, Norway; ²Haukeland University Hospital, Department of Physiotherapy, Bergen, Norway; ³Western Norway University of Applied Sciences, Department of Health and Social Sciences, Bergen, Norway; ⁴Haukeland University Hospital, Centre of competence on clinical research, Bergen, Norway; ⁵Haukeland University Hospital, The Norwegian Arthroplasty Register, Bergen, Norway; ⁶Haukeland University Hospital, Department of Clinical Medicine, Bergen, Norway

Background: Patients with hip osteoarthritis tend to develop stereotype and energy demanding movement strategies with potential negative effects on disease progression and daily life functioning. A multi-perspective view on movement quality is applied in the physiotherapy modality Basic Body Awareness Therapy (BBAT), with its movement awareness learning pedagogy. BBAT has been found

beneficial for functional movement quality, symptoms, and psychological aspects of health in patients with various long-lasting conditions.

Objectives: To investigate the short-term (6 months) effects of BBAT, added to Patient Education (PE) compared with PE only in patients with hip osteoarthritis.

Methods: A block-randomized controlled trial with 6 months follow-up was conducted. Patients were allocated to 3.5 hours of PE plus 12 weekly sessions of BBAT, each lasting 90 minutes (intervention group), or to PE only (comparison group). Primary outcomes: Numeric Rating Scale (NRS) for pain during walking and Hip Osteoarthritis Outcome Score, subscale Activities of Daily Life (HOOS A). Secondary outcomes included physical capacity tests: Chair test, Stairs test, six-minutes walking test (6MWT), movement quality evaluation: Body Awareness Rating Scale – Movement Quality and Experience (BARS-MQE), and self-reported measures: Activity level (UCLA), function (HOOS subscales P, S, SP, QL and Harris Hip Score (HHS), self-efficacy (Arthritis Self-efficacy Scale, ASES), and health (Euro-QoL, EQ-5D-5L).

Patient Global Impression of Change (PGIC) on pain and function was registered at 6 months.

ANCOVA of change was used in intention-to-treat and per protocol analysis.

Results: 101 patients were included, average age 63 years, 80% female. There was no difference in change between the groups on the primary outcomes at 6 months. However, movement quality (BARS-MQE) improved more ($p < 0.001$) in the intervention group, and the patients reported more improvement in pain (PGIC) than the comparison patients ($p = 0.031$). In per protocol analysis, including 30 patients who attended at least 10 BBAT sessions, intervention patients had statistically significant better scores on self-efficacy (ASES pain, $p = 0.049$), health (EQ5D5L VAS, $p = 0.037$) and function (HHS, $p = 0.029$) than the comparison patients.

Conclusion: Patients with hip osteoarthritis were not found by the primary outcome measures to improve more by BBAT added to PE than by PE alone. Movement quality improved, however, significantly more in the intervention group. With sufficient compliance to BBAT, significant more improvement in additional health indicators was demonstrated.

References:

- [1] Egloff C, Hugle T, Valderrabano V. Biomechanics and pathomechanisms of osteoarthritis. *Swiss Med Wkly*. 2012;142:w13583.
- [2] Smith TO, Purdy R, Lister S, Salter C, Fleetcroft R, Conaghan P. Living with osteoarthritis: Systematic review and meta-ethnography. *Scand J Rheumatol*. 2014;43(6):441-452.
- [3] Skjaerven LH, Kristoffersen K, Gard G. An eye for movement quality: a phenomenological study of movement quality reflecting a group of physiotherapists' understanding of the phenomenon. *Physiother Theory Pract*. 2008;24(1):13-27.

Acknowledgments: The authors thank the funding institution; The Norwegian Fund for Post-graduate training in Physiotherapy.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.2540

FRIDAY, 05 JUNE 2020

HPR Patients' perspectives, functioning and health (descriptive: qualitative or quantitative)

FRI0645-HPR QUALITY OF DUTCH KNEE OSTEOARTHRITIS CARE: THE PATIENT'S PERSPECTIVE

Y. Peters¹, J. Vriezekolk¹, C. Van den Ende¹. ¹Sint Maartenskliniek, Nijmegen, Netherlands

Background: In the Netherlands over 1.2 million people have OA of which almost half have knee OA. Recently, several international and national guidelines and quality standards have been developed and adopted to improve the quality of knee OA care. Mapping the patient perspective is a valuable and important step to get insight into the current status of the quality of knee OA care and the uptake of the quality of care standards endorsed by current guidelines.

Objectives: To investigate the quality of knee osteoarthritis care from the patients' perspective in the Netherlands.

Methods: Members of a large observational prospective cohort (n=622), consisting of people clinically diagnosed or suspected with knee OA, were invited to complete an online survey. Besides demographic characteristics participants were inquired whether they contacted a health care professional(s) in the last year for their knee OA and, to fill in a slightly adapted version of the "OsteoArthritis Quality Indicator (OA-QI) questionnaire. In addition, participants rated the quality of knee osteoarthritis care in the Netherlands on a 10-point scale (1: very poor - 10: excellent), and were invited to make recommendations for knee OA healthcare improvement via open-ended questions.