

THURSDAY, 14 JUNE 2018

HPR Interventions (educational, physical, social and psychological)**THU0715-HPR STRATIFIED EXERCISE THERAPY BY PHYSICAL THERAPISTS IN PRIMARY CARE IS FEASIBLE IN PATIENTS WITH KNEE OSTEOARTHRITIS**

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Background: There is strong evidence that exercise therapy is effective in reducing pain and activity limitations in knee osteoarthritis (OA), but effect sizes are low to moderate. Stratified exercise therapy tailored to clinically relevant subgroups of patients is expected to optimise treatment effects in a cost-effective manner.

Objectives: This study aimed to explore the feasibility of a newly developed model of stratified exercise therapy in primary care.

Methods: A mixed method design was used, consisting of an uncontrolled pre-test-posttest design and a process evaluation. Eligible patients visiting a participating primary care physical therapist (PT) were included. Based on our model, participants were allocated to the 'high muscle strength subgroup', 'low muscle strength subgroup', 'obesity subgroup' or 'depression subgroup', and received subgroup-specific, protocolised, 4 month exercise therapy. Feasibility of stratified exercise therapy according to this model was evaluated by a process evaluation (process documentation, semi-structured interviews and focus group meeting) and outcome (physical functioning (KOOS-ADL) and knee pain (NRS), assessed at baseline and 4 months follow-up).

Results: We included 50 patients, of which 3 patients dropped out. The process evaluation suggests that our model is feasible for patients and PTs, with some adaptations for further optimisation. We found clinically relevant improvements on physical functioning ($p < 0.001$; 20%) and knee pain ($p < 0.001$; 37%) for the total group. PTs provided on average 10 sessions, ranging from 2 to 24. The average number of sessions was 6 for the 'high muscle strength subgroup', 12 for the 'low muscle strength subgroup', 13 for the 'obesity subgroup' and 16 for the 'depression subgroup'.

Conclusions: Our model of stratified exercise therapy is feasible in primary care. Minor adaptations could further optimise the feasibility. Future research should determine the (cost-)effectiveness of this model, compared to usual, non-stratified exercise therapy.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1339

THU0716-HPR THE IMPACT OF EXERCISE ON SLEEP IN PEOPLE WITH RHEUMATOID ARTHRITIS: A PILOT RANDOMISED CONTROLLED TRIAL

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Background: Reduced sleep duration and poor sleep quality are prevalent complaints in rheumatoid arthritis (RA). These in turn may further deteriorate functional ability and reduce the person's exercise levels. Current rheumatology guidelines recommend exercise as a key component in the management of RA however, what is lacking is its impact on sleep.

Objectives: To obtain reliable estimates regarding recruitment rates; retention; protocol adherence; adverse events, in addition to producing estimates of the potential effect sizes of the intervention on changes in outcomes of sleep duration; sleep quality and disturbances; RA related pain; depression; anxiety; functional limitation; disease activity and fatigue.

Methods: Participants were recruited in person at weekly rheumatology clinics at a University Hospital and through self-selected social networking. They were randomised to either a walking based exercise intervention consisting of 28 walking sessions, with 1 per week being supervised by a trained physiotherapist, spread over 8 weeks (2–5 times/week), or a control group who received advice on

the benefits of exercise for people with RA. Ethical approval was received. Descriptive statistics and t-tests were used to analyse the data with SPSS v22.

Results: One hundred and one (101) people were identified through the rheumatology clinics, with 36 contacting the primary investigator through social networking. Of these, 24 met the eligibility criteria, with 20 being randomised (18% recruitment; 100% female; mean age 57 (SD 7.3 years). Ten exercise participants (100%) and 8 controls (80%) completed final assessments, with both groups being equivalent for all variables at baseline. Exercise participants completed 87.5% of supervised sessions and 93% of unsupervised sessions. No serious adverse events were recorded and through semi-structured interviews the intervention was highly acceptable to exercise participants. Pittsburgh Sleep Quality Index (PSQI) global score showed a significant mean improvement between the exercise group -6.6 (SD 3.3) compared to control -0.25 (SD 1.1) ($p = 0.012$); PSQI subcomponent sleep duration showed a significant improvement in mean hours between the exercise group 1.65 (SD 0.39) and control 0.56 (SD 0.46) ($p = 0.021$); PSQI subcomponent sleep quality indicated those in the exercise group improved their sleep quality from fairly bad/poor to fairly good/very good, while those in control reported no change at fairly bad/poor. Global rating of change indicated exercise participants reporting their sleep was minimally/much improved, while control participants reported no change/minimally worse, post intervention.

Conclusions: The walking based exercise intervention designed to improve sleep was feasible, safe and highly acceptable to study participants, with those participants in the exercise group reporting improvements in sleep duration and sleep quality compared to the control group. Adverse events were predominantly mild. This pilot provides a framework for larger intervention studies and based on these findings a fully powered trial of walking as an exercise based intervention is recommended, preceded by focus groups to investigate methods to improve recruitment of males.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2307

THURSDAY, 14 JUNE 2018

HPR Patients' perspectives, functioning and health (descriptive: qualitative or quantitative)**THU0717-HPR IMPAIRED MUSCLE FUNCTION AND SHOULDER-ARM MOVEMENT IN PATIENTS WITH SYSTEMIC SCLEROSIS**

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Background: A few studies report limitations in upper and lower extremity mobility and muscle function in patients with systemic sclerosis (SSc). Little is known about to what extent skin involvement (lcSSc/dcSSc) and lung function (no-mild vs moderate-endstage lung disease) influence active range of motion (AROM) in the shoulder-arms and muscle function in patients with SSc.

Objectives: We aim to examine shoulder-arm AROM, shoulder and hip muscle endurance as well as lower extremity muscle function in patients with SSc in comparison with reference values and also to explore possible differences in function depending on lung function and skin involvement.

Methods: 205 patients, fulfilling the EUSTAR/ACR criteria for SSc, were recruited from the Karolinska University Hospital. AROM in shoulder-arms (Functional Shoulder Assessment, FSA), muscle endurance in shoulder and hip flexion (Functional Index 2, FI-2), and muscle function in the lower extremities (Timed-Stands Test, TST) were assessed and compared with reference values. Patients were classified as to lung disease severity using sub-items from the SSc disease severity score for lung involvement. Patients with a score of 0–1 were classified as no-mild lung disease and a score of 2–4 as having moderate-endstage lung disease.

Results: SSc-patients had overall more reduced muscle endurance (FI-2, % of predicted) in shoulders 53(27–100) and hips 40(23–90) when compared with reference values, 100(100–100) and 100(72–100) ($p < 0.001$) and patients with moderate-endstage lung disease were more impaired, 39(21–71) and 35(20–70) than no-mild, 57(33–99) and 48(28–100) ($p < 0.05$). No differences were found between dcSSc/lcSSc. All patients, regardless of subgrouping, had lower muscle strength when measured with TST, 21(17–29) seconds, when compared to reference values, 17(15–18) ($p < 0.001$). The FSA-scores was overall lower on both right, 22(20–24) and left, 23(20–24) compared with reference values 23(22–24) and 23(22–24) ($p < 0.05$), especially in patients aged 60 years or more. DcSSc-patients had lower FSA-score than lcSSc-patients ($p < 0.05$). No differences were found between patients with no-mild and moderate-endstage lung disease.

Conclusions: SSc-patients have markedly reduced muscle endurance and muscle function compared with reference values and patients with moderate-end-stage lung disease have reduced lower extremity muscle function compared to patients with no-mild lung disease. SSc-patients have slightly less AROM than controls and dcSSc-patients are more restricted than lcSSc. This study highlights the importance of identifying patients with an enhanced risk of developing severe muscle impairments. We suggest that physiotherapists regularly assess muscle function using standardised tests and when needed initiate exercise to improve function

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2575

THU0718-HPR THE PSYCHOSOCIAL IMPACT OF JOINT HYPERMOBILITY SYNDROME AND EHLERS-DANLOS SYNDROME (HYPERMOBILITY TYPE): A QUALITATIVE INTERVIEW STUDY

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Background: Existing research examining those with Joint Hypermobility Syndrome (JHS) and Ehlers-Danlos Syndrome (Hypermobility Type) (EDS-HT) has predominately focused on factors such as pain, range of movement and physical function. However psychosocial factors have received much less attention.

Objectives: This study sought to 1. Identify the psychosocial impact of JHS/EDS-HT by examining participants' lived experiences, and; 2. Identify characteristics of effective coping with JHS/EDS-HT, using qualitative methods.

Methods: Adults with JHS/EDS-HT took part in semi-structured telephone interviews to discuss their own lived experiences and the impact of the condition on their lives. All met the Hakim and Grahame (2003) five-item criteria for clinically significant joint hypermobility, and had a self-confirmed diagnosis of JHS/EDS-HT. The transcripts were coded using NVivo 10 and analysed using inductive thematic analysis.

Results: 17 participants (14 women, 3 men) took part (age range 22–70, mean 38 years). The sample was purposively selected from across the UK to broadly represent different genders, ages and ethnicities. Inductive thematic analysis indicated five main themes:

Healthcare limitations: All participants reported a lack of awareness of JHS/EDS-HT among healthcare professionals, and diagnosis typically took several years. Examples were given where local anaesthetics had either partly or completely failed, leaving patients aware of severe pain during surgical or dental procedures.

A restricted life: Participants experienced a range of symptoms including joint pain and instability, fatigue, gastrointestinal issues, frequent dislocations and subluxations. Due to difficulty completing daily activities, some relied on their partners or family for support, but this led to feelings of guilt and shame.

Social stigma: The invisible nature of their condition led to participants facing criticism and confrontations with others as they 'looked fine'. Fears of being judged led some to hide their symptoms. Many felt frustrated and angry that due to fatigue or injury they could not keep up with friends, family or colleagues.

Fear of the unknown: Not knowing when the next injury was going to occur, and how JHS/EDS-HT would affect them over time made participants especially fearful of declines in their physical ability. Many cited a lack of reliable information about their condition, other than in published books or research journals. Psychological support to better cope with the enduring impact of JHS/EDS-HT on their lives was lacking.

Ways of coping: Several coping approaches were identified by participants, including acceptance of their condition, building social networks, finding out more about JHS/EDS-HT and adapting their activities. Physiotherapists were instrumental in supporting participants to exercise regularly.

Conclusions: The results of this qualitative study highlight the significant psychosocial impact of JHS/EDS-HT on participants' lives. Further research should consider potential interventions to improve information provision, address psychological support and increase awareness of JHS/EDS-HT among healthcare professionals.

REFERENCE:

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2107

THU0719-HPR NON-PHARMACOLOGICAL CARE IN SYSTEMIC SCLEROSIS: ROOM FOR IMPROVEMENT?

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Background: Although health professional (HP) treatment is considered to be a corner stone in the management of systemic sclerosis (SSc), little is known about the referral process to and the content of non-pharmacological care in SSc.

Objectives: To describe the contribution of HP to SSc care from the perspective of SSc patients, including the referral process, use of care provided by HP, treatment targets and outcome satisfaction.

Methods: Dutch SSc patients from different hospitals were invited through their rheumatologists (RT) to complete an still ongoing online survey provided by the ARCH (Arthritis Research and Collaboration Hub) working group, containing questions on a wide range of issues within SSc care. Items concerning access to care (referral versus direct access), use of HP services, and quality of care perceived by patients assessed by the CQ Index were extracted to answer the research question. Reasons for referral/direct access and treatment targets were examined by means of open questions.

Results: On January 10th, 2018, 433 SSc patients, 73% women (n=317), with a median age of 61 (SD=10,81) completed the survey. 38% of the patients had limited and 23% diffuse cutaneous SSc. The mean time since diagnosis was 4,1 years.

In total, 10 different HP disciplines were reported and 76% (n=331) of the patients ever had contact with one or more HP; 50% (n=215) had contact with a HP in the past year. Compared to the other 9 disciplines named, physiotherapists (PT) were the most often referred to; 57% (n=245) had PT treatment since SSc onset, 41% (n=177) in 2017, whereas only 35 were referred to occupational therapists and 9 to hand therapists (figure 1).

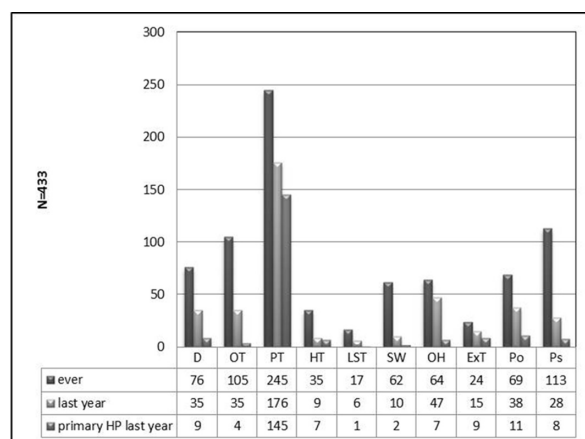
Rheumatologists (RT) were the main referrers to HP care with 49% (n=106); 27% (n=59) sought care by one or more HP through direct access in the past year. A total of 52% (n=111) of the 215 patients that received HP treatment in 2017 perceived the collaboration between their RT and the treating HP as insufficient and 68% (n=146) reported that RT and HP did not make good agreements with each other. Further, 45% (n=97) of the patients felt that there was no coordination between the referrers and the HP about advices issued.

76% (n=164) of respondents found their HP sufficiently competent for SSc treatment. 73% (n=156) could cope better with their complaints after the treatment and reported improvement in their daily activities. Qualitative analysis of the data on the PT as main HP treatment provider in 2017 yielded 36 different referral reasons and 42 treatment targets, of which the most frequently mentioned (>4) are shown below.

Most frequent reasons for referral and therapeutic objectives physiotherapy

Referral reasons: pain, joint problems, shoulder problems, decreased mobility, back problems, muscle weakness/stiffness/ pain and general stiffness.

Treatment targets: improvement of general mobility, joint mobility, condition, muscle function, skin flexibility and hand function, pain relief, stiffness avoidance and fatigue reduction.



D=dietitian, OT=occupational therapist, PT=physio therapist, HT=hand therapist, LST=language and speech therapist, SW=social worker, OH=oral hygienist, EX=exercise therapist, Po=podiatrist, Ps=psychologist

Abstract THU0719HPR – Figure 1. Frequency of referrals to health professionals

Conclusions: HP treatment is a meaningful part of SSc care, as reflected in the satisfaction of SSc patients. The results describe a suboptimal communication