References:

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AB1316-HPR

COMORBIDITIES IMPACT ON PHYSICAL REHABILITATION PROGRAM OUTCOMES IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Physical rehabilitation is proposed as a method of non-pharmacological treatment of knee osteoarthritis (OA) by the EULAR and OARSI recommendations. At the same time, presence of concomitant diseases could influence the condition of patients and the outcomes of the rehabilitation program.

Objectives: To evaluate the frequency of comorbidities in OA patients and to appreciate their impact on outcomes of the physical rehabilitation program.

Methods: A prospective control case study was conducted in the University Rehabilitation Center. The patients underwent clinical examination, VAS scale was used to assess level of pain, and Knee Injury and Osteoarthritis Outcome Score (KOOS) with 5 domains (Pain, Symptoms, ADL, Sport, QoL) for joint function assessment. These parameters were evaluated at the onset of the program (T0) and at the end of the 10th day (T1). Medical data records, general clinical exam and Charlson Comorbidities Index (CCI) assessed the comorbidities.

Results: 48 patients with OA were included in the study, 37 patients of them were found with comorbidities. The most frequent associated diseases were: cardiovascular- 76.6%, obesity-59.9%, and endocrine - 12.9% cases. At T0, significantly lower levels in the group with comorbidities were identified on the domains Pain, Sport and QoL. The CCI in patients with comorbidities was 3.29 ± 0.14 points (82.1% for 1-year survival rate). At the T1 moment, we found an improvement in joint functionality in both groups. The mean value of the VAS score group of patients without comorbidities decreased from 48,18mm to 21,36mm ($p < 0.05$) and for the group of patients with comorbidities - 64,2 at / 36,2mm ($p < 0.001$). Significant improvement in joint function in the comorbidities group was in Pain ($p < 0.01$), Sport ($p < 0.05$) and QoL ($p < 0.01$) domains, at the same in patients without comorbidities, the improvement was significant in all 5 domains.

Conclusion: Comorbidities are highly associated to knee osteoarthritis and prove to have a negative influence on the results of the physical rehabilitation program; therefore, we would recommend to apply individualized rehabilitation programs adapted to the associated conditions of each patient.

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AB1317-HPR

YOGA-THERAPY: IMPROVEMENT IN PSORIATIC ARTHRITIS PROMS AT 4 MONTHS

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Background: Psoriatic Arthritis and Psoriasis have a major impact on QOL with associated mood disorders and Cardiovascular disease and Cancer as inter-related co-morbidities¹. Yoga therapy (Y-T) has been used in several Long Term Conditions² and we have reported Rapid improvement in Proms in RA (RCP 2018) and so compared results of a PsA cohort offered the same Y-T intervention.

Objectives: This first in UK PsA study investigated: a) impact of a 16 week Y-T intervention on functional outcomes and QOL in 10 PsA patients, b) acceptability and experiences of the intervention. We present results in comparison to a previously reported RA cohort n=10.

Methods: Ten adult PsA patients (2M 8 F Age 32-67 Avg: 53.7 Y; PsA diagnosis: 6.45 yrs: 1 Juvenile onset) consented to 10 individual Y-T sessions (weekly x 4; biweekly x 6) with a yoga therapist in a standard consulting room. The intervention was tailored to the needs and abilities of each patient and included: breath-centered physical yoga postures, breathing and visualization techniques, mantras and meditation, with supportive Lifestyle/behavioural strategies. All participants completed measures pre- and post-intervention (EQ-5D HAQ HADS PGIC) to assess change in health status.

Results: A 10 session course of Y-T over 16 weeks was completed with 92/100 PsA YT sessions. Note 1 patient had unrelated Trauma and withdrew after 2 sessions. This confirms acceptability of delivery in a clinic setting and all participants

reported strong adherence to practices (0-1) and strong belief (0-2) in impact of yoga. (Likert 5 point 0-4 scale).

Further data on only 9 PsA participants will be presented in comparison to the previous RA cohort of 10.

PsA patients n=9: Pain reduced 25 % HADs Depression reduced 39% Anxiety reduced 25%

HAQ health score improvement was significant at $P < 0.04$ (ANOVA).

EQoL 5d(3L) improved 24% but overall QOL remained below 50% max calculated TTO.

RA patients had recorded stable overall TTO at a higher level 0.63 pre and post Y-T.

PGIC record of positive change is recorded as a reduction on VAS from 5/5 to 2.4/5.

We will add 12 month FU data set in PsA to compare with 24 month data in the RA cohort.

Conclusion: Yoga-Therapy is deliverable and acceptable in a NHS clinic setting for PsA. Improved PROMS begs further larger studies of mechanisms of bio-psychosocial intervention in long term inflammatory conditions. The outcomes support the Poly Vagal Theory³ as an effector model, via the bio-mechanistic neuro-inflammatory reflex⁴. We propose further Health Economic analysis of this 2500 yr old Yoga model for long term conditions to examine any long term cost benefit to the NHS.

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Table 1. PsA vs RA post Yoga Therapy PROMs at 4 mth.

	PsA n=9 pre	PsA 4 m	PsA 4 m % RA n=10	PreRA4m	FU RA 4m	%
HADS m Depression	6.33	3.88	-39	6.7	2.3	-65
HADS m Anxiety	8.56	6.44	-25	9.4	4.8	-48
Mean HAQ	0.79	0.75	-2	0.78	0.48	-26
M Pain Score (HAQ)	60	45.00	-25	57	24	-58
M Health Score (HAQ)	60	42.7	-29	51	17.2	-66
M H Utility TTO (EQoL5d)	0.41	0.5	+24	0.63	0.63	0
PGIC	5	2.4				

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AB1318-HPR

VAGUS NERVE STIMULATION IN PATIENTS WITH RHEUMATOID ARTHRITIS: 48 MONTH SAFETY AND EFFICACY

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Background: Rheumatoid arthritis (RA) is a disease with significant remaining unmet medical needs for better treatments. Vagus nerve stimulation (VNS) to activate the inflammatory reflex (cholinergic anti-inflammatory pathway) represents a novel experimental therapy for RA.¹ Previously, we reported that inflammatory reflex activation by VNS reduced pro-inflammatory cytokine production and improved disease activity in a 17-patient rheumatoid arthritis (RA) proof-of-concept study using a reprogrammed epilepsy stimulator²; clinical improvement was sustained for 24 months without untoward safety signals.³ Here we report the 48 months results from this long-term observational study.

Objectives: Determine the long-term safety and efficacy of VNS for the treatment of RA

Methods: In the primary study, a VNS device was implanted into 17 RA patients, mostly with insufficient response to multiple conventional and biologic DMARDs, on stable background of methotrexate (≤ 25 mg weekly) therapy². The device electrically stimulated the vagus nerve, 1-4 min/day, over a 12-week open label