AB1382-HPR COMPARISON OF EFFICACY OF DIFFERENT REHABILITATION APPROACHES IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS

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Background: Osteoarthritis (OA) is the most common rheumatologic disease in the world, resulting primarily in progressive cartilage destruction. OA-induced changes are the main cause of disability and are mostly seen in the knee joint.
Objectives: To investigate the effects of different rehabilitation practices on the range of motion, muscle strength, pain, physical function and quality of life in patients with knee OA.
Methods: Thirty patients between the ages of 40-65 with knee OA were included in the study and divided into 3 groups. Transcutaneous Electrical Nerve Stimulation (TENS), ultrasound, hotpack/coldpack and home exercise program were given to the 1. group (n=10) for 15 days. 2. group (n=10) received three doses of Platelet-Rich Plasma (PRP) followed by home exercise program for 15 days. The control group (n=10) received only home exercise program for 15 days. All individuals were evaluated using 'Goniometer' for Range of Motion (ROM), 'Manual Muscle Test' for M. Quadriceps femoris muscle strength, 'Visual Analogue Scale' for pain, 'The Western Ontario and McMaster Universities Arthritis (WOMAC) Scale' for physical function and 'Short Form-12 Quality of Life Scale Mental (SF-12 - MC) and Physical Component (SF-12 - PC)' for quality of life at baseline and end of treatment.

Abstract AB1382HPR Table 1. Results before and after treatment

		1. Group			2. Group			Control Group		
		Pre Treatment Ave±SD	Post Treatment Ave±SD	p*	Pre Treatment Ave±SD	Post Treatment Ave±SD	p*	Pre Treatment Ave±SD	Post Treatment Ave±SD	p*
Quadriceps Femoris Muscle Strength	Right	4,50±0,52	4,55±0,49	0,317	4,30±0,53	4,45±0,55	0,083	4,45±0,36	4,60±0,45	0,083
	Left	4,35±0,62	4,40±0,61	0,317	4,35±0,52	4,45±0,55	0,157	4,50±0,52	4,60±0,39	0,157
Knee ROM	Right	91,5±28,5	98,0±26,4	**0,042**	99,0±10,7	101±9,06	**0,046**	111±9,73	113±8,23	0,083
	Left	94,0±24,0	105±10,9	**0,026**	94,0±13,2	97,5±13,5	**0,035**	106±14,3	109±13,6	0,063
VAS	Resting	3,00±2,53	1,40±2,06	0,067	1,50±3,17	0,80±1,75	0,180	1,00±1,05	0,40±0,69	**0,034**
	Activity	6,50±3,27	2,00±2,35	0,007	4,90±3,34	2,30±2,62	0,007	2,80±2,14	1,00±1,33	**0,011**
WOMAC		56,3±12,2	37,8±16,5	0,007	45,9±21,2	39,1±20,0	0,005	35,2±12,1	28,1±13,5	**0,009**
SF-12	PC	33,4±10,6	37,0±10,8	0,139	40,8±5,99	40,9±6,99	0,333	41,2±9,48	47,1±10,1	**0,037**
	MC	48,5±10,4	58,1±4,14	**0,022**	37,1±11,4	46,0±15,9	**0,028**	48,6±12,5	49,8±11,2	0,799

Abstract AB1382HPR Table 2. Comparison of pre- and post-treatment measurement results between groups

		Pre - Treatment				Post - Treatment			Between Groups
		1.Group n=10 Ave±SD	2.Group n=10 Ave±SD	Control Group n=10 Ave±SD	p*	1.Group n=10 Ave±SD	2.Group n=10 Ave±SD	Control Group n=10 Ave±SD	p*
Quadriceps Femoris Muscle Strength	Right	4,50±0,52	4,30±0,53	4,45±0,36	,652	4,55±0,49	4,45±0,55	4,60±0,45	0,487
	Left	4,35±0,62	4,35±0,52	4,50±0,52	,775	4,40±0,61	4,45±0,55	4,60±0,39	0,793
Knee ROM	Right	91,5±28,5	99,0±10,7	111±9,73	**,038**	98,0±26,4	101±9,06	113±8,23	0,322
	Left	94,0±24,0	94,0±13,2	106±14,3	,119	105±10,9	97,5±13,5	109±13,6	0,375
VAS	Resting	3,00±2,53	1,50±3,17	1,00±1,05	,061	1,40±2,06	0,80±1,75	0,40±0,69	0,175
	Activity	6,50±3,27	4,90±3,34	2,80±2,14	**,037**	2,00±2,35	2,30±2,62	1,00±1,33	**0,031**
WOMAC			40,8±5,99	41,2±9,48	,113	37,0±10,8	40,9±6,99	47,1±10,1	**0,013**
SF-12	PC	56,3±12,2	45,9±21,2	35,2±12,1	**,007**	37,8±16,5	39,1±20,0	28,1±13,5	0,173
	MC	48,5±10,4	37,1±11,4	48,6±12,5	,059	58,1±4,14	46,0±15,9	49,8±11,2	0,107

Results: Statistically significant difference was found at pain and WOMAC score at the time of activity in all groups (Table 1). Statistically significant difference was found at ROM and SF-12 MC score in group 1 and 2; at resting pain and SF-12 PC score in control group ($p < 0.05$) (Table 2).
Conclusion: In addition to electrotherapy treatment and PRP in knee OA treatment, it is thought that home exercise program can be used to relieve symptoms and improve quality of life in knee OA.

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AB1383-HPR THE VALIDITY AND RELIABILITY OF UNSUPPORTED UPPER LIMB EXERCISE TEST IN INDIVIDUALS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a systemic, inflammatory disease that causes pain, joint destruction and disability. RA affects the function of the hand and upper extremities; function deteriorates as the disease progresses and affects independence. Unsupported upper-limb exercise (UULEX) test was developed to evaluate upper extremity function and endurance in individuals with Chronic Obstructive Pulmonery Disease. It is suggested that this test can be used in other clinical cases with arm disabilities.
Objectives: The aim of this study was to examine whether the UULEX Test is valid and reliable in individuals with RA.
Methods: 71 individuals with RA (15 male, 56 female) with an average age of 52.15 10.11 were included in the study. The Intraclass Correlation Coefficient (ICC) was used to assess the reliability of the UULEX test. Each individual was assessed by one physiotherapists in two different sessions, a week apart. The correlations of the UULEX test with Disabilities Arm, Shoulder and Hand (DASH), Health Assessment Questionnare (HAQ), 30 sec Push Up Test and 6 Peg Board Ring Test were assessed for concurrent validity.
Results: Intrarater reliability of final level, final weight, duration of the UULEX Test were determined to be excellent (ICC= 0.922, 0.960, 0.958). A moderate to excellent correlation was found between UULEX Test and DASH, HAQ, 30 sec Push Up Test and 6 Peg Board Ring Test ($p<0.05$).
Conclusion: The results of this study showed that the UULEX test is a valid and reliable method in the assessment of upper extremity endurance in individuals with RA.

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AB1384-HPR THE RELATIONSHIP BETWEEN QUALITY OF LIFE, PHYSICAL ACTIVITY LEVEL AND MENSTRUAL PAIN IN TURKISH WOMEN

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Background: Dysmenorrhea, defined as menstrual pain, is one of the common chronic pelvic pain problems associated with mussculoskeletal symptoms. [1] Dysmenorrhea is considered as a lower abdominal or pelvic pain appears just before and/or during menstruation and lasts about 2448 hours.[2] It is a common condition with prevalence rates between 50% and 91% in women. The daily life of women with menstrual pain can be adversely affected by pain and pain accompanying symptoms.[3] It is seen that these effects are mostly on the quality of life (QoL) of individuals. In addition, physical activity of individuals may be restricted due to menstrual pain.[4]
Objectives: The aim of this study was to determine the relationship between quality of life, physical activity level and the severity of menstrual pain in Turkish women.
Methods: 336 female cases aged over 18 years and with menstrual pain complaint in the majority of menstrual cycles were included in the present study. Menstrual pain severity was assessed by 0-10 point Visual Analogue Scale.[5] Physical activity level was assessed by the "International Physical Activity Questionnaire-Short Form" and the score was expressed in Metabolic Equivalent Task minutes per week. Total score of the short form included walking, moderate level activity and duration (minutes) and frequency (days) of sufficiently active. The quality of life of was assessed by the "Nottingham Health Profile". It consists of six parts: pain, physical activity, energy, sleep, social isolation and emotional reaction. The maximum score on any section is 100. The higher the score on any section the greater the number and severity of perceived problems in that area. Normality testing was performed on all data. Spearmans correlation was performed to identify correlation between menstrual pain score and other measures.
Results: The average age and body mass index of 336 participants were 223 years and 21,42,8 kg/m^2, respectively. There was a significant correlation between quality of life and menstrual pain severity (r=0.350; p:0.006). There was no significant correlation between physical activity level and menstrual pain severity (p>0.05).
Conclusion: Based on the results of the present study, quality of life seems to be related with menstrual pain. On the other hand, no relationship was identified between the physical activity level and menstrual pain. In order to determine the exact relationship, further studies with larger samples and with more varied levels of physical activity are needed.

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AB1385-HPR TRUNK STRENGTH AND SPINAL MOBILITY IN SPONDYLOARTHRITIS PATIENTS

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Background: Spondyloartritis (SpA) can seriously affect spinal mobility and trunk strength. Even though exercise therapy is considered one of the keystones of non-pharmacological treatment[1], guidelines on exercise programs remain vague due to a lack of objective measurements of physical parameters such as trunk mobility and strength. Data on these parameters are scarce for both axial and peripheral SpA-patients (axSpA and perSpA pts).
Objectives: The aim of this study was to measure trunk strength and spinal mobility in SpA-pts and compare these parameters to healthy subjects matched for gender and age and to determine differences between the pts when grouped based on symptom duration and on presence of radiographic sacroiliitis.
Methods: SpA-pts of the Be-Giant cohort were consecutively asked to participate in the study. After informed consent, BASDAI, BASFI and BASMI were evaluated. To measure trunk and cervical strength, pts performed 2 repetitions of a maximal isometric contraction for flexion, extension, lateral flexion and rotation on the David Back devices (DBD) after measuring the spinal mobility in these directions. The maximum value of the 2 repetitions was kept for further analysis. For assessments of lateral flexion and rotation, measured with the DBD, the mean was calculated for right and left measurements. Spinal mobility and trunk strength were compared with a healthy reference population, matched for gender and age by means of Wilcoxon singed-rank tests. When comparing the perSpA with the r-axSpA and the nr-axSpA, a Kruskal Wallis test was used. A Mann-Whitney U test was used to check for differences between groups based on symptom duration.
Results: Thirty-one SpA-pts participated of which 18 were male (58%). Twenty-four (77%) were classified as axSpA and 7 (23%) as perSpA. Six (19%) of the axial pts had radiographic sacroiliitis and 18 (58%) were non-radiographic. Median time since diagnosis was 5 years and median symptom duration was 7.8 year. Mean age of the pts was 41 years (range: 21 58 years) and their BMI was on average 24 (range: 17-33). Averages for BASDAI, BASFI and BASMI were 2.6 (range 0.0-6.0), 1.7 (range 0-6.8) and 0.9 (range 0.6-4.4) respectively.
SpA-pts showed decreased mobility for cervical flexion (p<0.001), extension (p<0.001) and rotation (p<0.001) and trunk rotation (p=0.001) compared to the healthy population. Cervical and trunk muscle strength was significantly decreased in SpA-pts in all directions compared to the reference population (flexion: p=0.02, other directions: p<0.001).
When comparing mobility and strength based on groups by radiographic axial or peripheral involvement, no significant differences could be detected.
When grouped based on symptom duration, the pts with longer standing symptoms (>7.8 year) show a significant reduced mobility for cervical extension (p=0.004) and rotation (0.049) and lumbar rotation (p=0.033) and a trend toward significance for lumbar extension (p=0.066) compared to those with shorter symptom duration (<7.8 year). For strength no significant differences could be demonstrated between the groups.
Conclusion: Results of this study showed that SpA-pts have less mobility and decreased strength when compared with healthy gender- and age-matched controls.
When comparing within the patient group, based on radiographic involvement, there were no differences neither for mobility or strength. Only discrete differences were found for mobility and no differences for strength when grouped based on symptom duration.
Therefore, rehabilitation of all SpA-pts should focus not only on mobility but should include trunk strengthening exercises as well.

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