SATURDAY, 13 JUNE 2015

Occupational therapy

SAT0633-HPR ARTICULAR INVOLVEMENT OF THE SCLERODERMA HAND: AN ASSESSMENT PROTOCOL FOR PLANNING OCCUPATIONAL THERAPY STRATEGIES

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Background: Systemic sclerosis (SSc) is a rare inflammatory connective tissue disease acquired, chronic, progressive of unknown etiology characterized by irregular autoimmune response, changes in the small circle due to vascular disease, fibrosis of the skin and internal organs. Hand impairment is a major cause of morbidity and disability in about 90% of SSc patients

Although physiotherapy and rehabilitation programs to prevent and reduce the disability resulting from osteo-articular and skin involvement are recommended, only a few studies have been published on this feature.

Objectives: Our study aims an analysis of scleroderma hand through the application of instrumental tests and rating scales to suggest a specific evaluation protocol in order to highlight the main anomalies for planning occupational therapy strategies and to have specific outcome measure.

Methods: The study was conducted on 45 patients with SSc. In the protocol were included total active motion-TAM (Strickland), strength of the grip (Jamar dynamometer and pinchmeter) and the evaluation of 16 different types of prehension of objects encountered during activities of daily life.

Results: The Strickland measurement showed a symmetrical involvement of the hands for almost all patients (93%); furthermore observed that only 30% of patients have an excellent level in TAM (percentage of scoring higher 85%). A statistically significant reduced total active movement of the dominant hand was documented in diffuse SSc. Furthermore, the fingers more limited and therefore with lower TAM are the 2nd and 5th finger in both hands. At the second finger there is a statistically significant weaker strength of dominant hand related to disease duration in patients with dSSc (P value equals 0.0021). The grip strength (Jamar Dynamometer and Jamar pinchmeter) is extremely reduced in 75% of patients and focuses mainly on the dominant hand. If $<$15 kg (below normal range), the difference between the strength of dominant and non dominant hand is considered to be very statistically significant and the dominant is weaker (P value $<$0.017); in subjects without involvement of the hands with strength normal, dominant hand is stronger but there are not statistical difference (p=0.55)

The evaluation of 16 different types of prehension tested by a set of objects of different shapes has documented the impairment mainly of palmar grip (44%), tip to tip (37%) and vice (30%), followed by thenar grip, spherical grip and three jaw in a few cases.

Conclusions: The documentation for greater involvement of the dominant hand with a reduction of the ROM in particular of 2 and 5 finger associated to decreased grip strength focus on confirm the importance of the hand use in daily life as the cause of greater disease damage. It is essential to plan quickly in patients with early systemic sclerosis an educational program to make the best use of work strategies equally distributed between dominant and non dominant hand and replacement activities for digit handheld, end-to- terminal and vice grip.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2015-eular.4140

SAT0634-HPR DEVELOPMENT AND RELIABILITY OF TURKISH VERSION OF THE SHORT FORM-JOINT PROTECTION BEHAVIOR ASSESSMENT (JPBA-S)

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Background: Joint Protection Behavior Assessment was developed to evaluate the patient's use of behaviors in daily activities with hand using in patients with rheumatoid arthritis. A short version of the JPBA (JPBA-S) consisting of 10 tasks for the activity of preparing instant coffee has been found to be reliable compare with the full-length JPBA.

Objectives: To adapt the original JPBA-S to a Turkish version (TUR-JPBA-S) and to develop assessment manual and to investigate the reliability of assessment in patients with RA.

Methods: 15 participants with RA were videotaped while they were doing tasks in original version for manual development and face validity (phase 1). The video recordings were analyzed by two therapists. TUR-JPBA-S was developed with the consensus of four therapists who were working on occupational therapy. 22 participants with RA and 21 healthy people were videotaped while doing TUR-JPBA-S for the second part of the study (phase 2). Two raters were analyzed the records and gave a rate to strictly follow the manual (inter-reliability). One rater were re-analyzed the recordings at different time point (intra-rater reliability). Participants with RA were re-recorded after three to four weeks period. One rater analyzed the re-records (test-retest reliability). The evaluators' composite results were compared between and within raters using the kappa coefficient and ICC's for categorical scoring respectively.

Results: There were some differences in TUR-JPBA-S. For example; (i) therapists decided with consensus to videotape the participants while they were making tea in Turkish style teapot with using cattle for heating up the water; (ii) the task "holding milk" were changed as "carrying tray". Internal consistency (Cronbach α value) was found to be high (0.89) for participants with RA. There was a significant difference in JPBA scores between patients with RA and healthy participants ($p<0,001$). Our results demonstrated excellent intra-rater (ICC: 0.99, SEM: 1.2) inter-rater (ICC: 0.99, SEM: 1.7) reliability. Also excellent test retest reliability was found ($ICC_{2:1}$, 0.96). There was a 100% agreement in 5 tasks in intra-rater agreement while there was 100% agreement in 4 tasks in inter-rater agreement.

Conclusions: The TUR-JPBA-S provides valid and reliable instrument for assessing JP behavior of patients with RA in Turkey.

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Acknowledgements: We want to thank to Prof. Alison Hammond to give permission for using assessment and support our research.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2015-eular.2706

SAT0635-HPR LINGUISTIC VALIDATION AND CULTURAL ADAPTATION OF THE VALUED LIFE ACTIVITIES SCALE IN TURKEY IN PEOPLE WITH RHEUMATOID ARTHRITIS

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Background: The Valued Life Activities Scale (VLAs) was specifically developed for people with rheumatoid arthritis (RA)[1] to measure daily activities and participatory roles. The original VLAs items (75) were derived from content analysis of diaries completed by patients with RA or osteoarthritis. Revisions have been made to the scoring, items grouped into domains using factor analysis and the items were revised (and reduced to 33) based on participants' responses as to which items are most important to them[2-5].

Objectives: To conduct the linguistic and cultural adaptation of the VLAs to Turkish prior to psychometric testing to validate the use of this questionnaire in Turkish people with RA.

Methods: The linguistic and cultural adaptation of the VLAs was conducted following guidelines for the process of cross-cultural adaptation of self-reported measures[4]. This involved the (i) initial forward translation of the British-English version of VLAs by two (informed and uninformed) native Turkish speakers; (ii) synthesis through consensus; (iii) back translation by two native English speakers who were blinded to the content of the questionnaire, and did not have medical backgrounds; and (iv) a final review conducted by an expert panel which consolidated all the versions and developed a pre-final Turkish VLAs (TUR-VLAs). Following this, to ensure the TUR-VLAs content is understandable and relevant to Turkish people with RA, face-to-face cognitive de-briefing interviews were conducted. Participants were recruited from rheumatology clinics ensuring a broad range of demographics such as participants' age, employment status and functional abilities.

Results: At the end of a four staged translation and cross-cultural adaptation process only minimal changes (e.g. "going to café" were used instead of going to the pub) were made to the questionnaire. Following this, cognitive de-briefing interviews were conducted with six participants (age: 45.16 (SD11.30) years; female:5 (83%); disease duration:13.83 (SD6.46) years; HAQ:9 (SD 2.76). Of these three people were employed, two were home-makers and one was retired. Participants found the TUR-VLAs content easily understandable, and relevant to Turkish people. As a result, no items were removed and no new items were added to TUR-VLAs.

Conclusions: The linguistic and cross-cultural adaptation of the VLAs to Turkish provides a basis for the first rheumatology occupational therapy assessment in Turkey. Following the psychometric testing of TUR-VLAs this instrument will be freely accessible for Turkish health professionals working in rheumatology for both clinical assessment and research purposes.

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Acknowledgements: We would like to extend our thanks to participating patients

and the administrative staff from the Marmara University Hospital. Also many thanks to the EULAR Health Professionals Grant for funding this study.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.2418

SAT0636-HPR DEVELOPMENT OF MEASURING DEVICES FOR EVALUATING HAND FORCE IN RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is associated to impaired hand function and difficulties to perform daily activities despite contemporarily early instituted medication. Hand force in finger flexion, which is strongly related to difficulties to perform activities, has often been measured with the electronic device Grippit that no longer is manufactured. Thereby the GRIP-it was recently developed. Since the hand force in finger extension also is related to daily activities the electronic device EX-it newly has been developed.
Objectives: The objectives were to describe i) hand force in finger flexion and finger extension in RA using GRIP-it and EX-it and relate these results to the Grippit ii) to explore relations between Grippit and GRIP-it to age, hand stiffness, hand pain during rest and hand pain during GRIP-it and Grippit measure and to iii) analyze possible sex differences.
Methods: 69 patients (74% women) with RA were recruited at a rheumatology unit in Sweden. The mean age (64 years (sd 12)) did not differ significantly between men and women, neither did the HAQ score (women 0.9 (0.9) vs men 0.4 (0.5). Data for Grippit, GRIP-it, EX-it, hand pain and hand stiffness were obtained at a visit to an occupational therapist at the clinic. Data for the right hand was analyzed regarding correlations and in the multiple regression analysis. The study protocol has been approved by the Local Ethic Committee and patients gave their written informed consent to participate.
Results: The correlation between Grippit and GRIP-it was high in both women and men (r =0.93; r =0.92). The correlation between EX-it and Grippit was high in women (r=0.76) and not significant in men (r=0.28). In regression models, controlling for sex, EX-it and Grippit were significantly explained by stiffness and age rather than by pain (at rest and at time for measure respectively). GRIP-it was significantly explained only by stiffness. No differences were seen between sexes regarding hand stiffness or hand pain but women have lower hand force than men in both flexion and extension.
Conclusions: Not surprisingly women have lower hand force in finger flexion and finger extension than men and the newly developed GRIP-it is highly correlated to Grippit. Measuring hand force in extension in men adds further information as it is not related to hand force in flexion. When controlled for sex, grip and finger extension forces as measured by the three instruments are related to stiffness in hands and are not discriminative for pain.
In clinical practice the assessment and interventions of hand dysfunction are important and related to activities of daily living. The newly gained knowledge of these assessment tools can be used for evaluation of rehabilitative interventions aimed at increasing hand force in finger flexion and finger extension and thereby facilitating daily activities.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.3433

SAT0637-HPR IMPAIRMENT IN THE ACTIVITIES OF DAILY LIVING IN OLDER ADULTS WITH AND WITHOUT OSTEOPOROSIS, OSTEOARTHRITIS AND CHRONIC BACK PAIN: RESULTS OF A POPULATION-BASED CROSS-SECTIONAL STUDY

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Background: Independence in performing activities of daily living (ADLs) is a central aspect of functioning. Older adults frequently experience impairments and limitations in functioning in various life areas.
Objectives: The aim of this survey was to explore the limitations in the activities of daily living in older adults in a population-based survey in Austria.
Methods: 3097 subjects aged ≥65 years of the Austrian health interview survey formed the cohort of this analysis. Descriptive statistics were used to calculate frequencies of problems in the ADLs. A principal component analysis was applied to analyze the main dimensions of 19 items of ADL. Binary logistic regression models were used with the ADL dimensions as the dependent variables and osteoarthritis, chronic back pain, osteoporosis, sex, education level, anxiety or depression, age and pain intensity as independent variables.
Results: People with musculoskeletal conditions were significantly more often affected by ADL problems than people without these diseases. The ADL domain which caused problems in the highest proportion of people was "doing heavy housework" (43.9%), followed by "bending or kneeling down" (39.3%), "climbing stairs up and down without walking aids" (23.1%), and "walking 500 meter without walking aids" (22.8%). The principal components analysis revealed four dimensions of ADLs: (1) intense "heavy burden" ADLs, (2) basic instrumental ADLs, (3) basic ADLs and (3) hand-focused ADLs. The proportion of subjects who had problems with the respective dimensions was 58.2%, 29.2%, 23.0%, and 9.2%. Anxiety/ depression (greatest effect), followed by the chronic musculoskeletal disease itself, female sex, higher age and pain intensity were significant predictors of ADL problems.
Conclusions: This population-based survey indicates that older people have considerable ADL problems. Older adults with musculoskeletal complaints could be a special target group for ADL specialists such as physical medicine and rehabilitation physicians and occupational therapists. More attention should be paid to the high impact of pain intensity, anxiety and depression on ADLs.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.3574

SATURDAY, 13 JUNE 2015

Miscellaneous forms of clinical care

SAT0638-HPR CLOSE THE GAP – MEDICATION DISCREPANCIES REVEALED BY MEDICATION RECONCILIATION

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Background: Studies have shown that 60-70% of patients have medication discrepancies (MD) between medication charts at hospital admission and what the patients are actually taking. These discrepancies could influence treatment and diagnosis. Medication reconciliation (MR) – which is a systematic process including a checklist and a structured interview of the patient – is recognized as a method to obtain a correct list. In Norway the patient are not used to bring their own medicines, even to elective hospital admissions. Most patients do not bring their medication list either. At our department there is no standard procedure for the quality assurance of obtaining the medication list.
Objectives: To implement the process of MR at the department of rheumatology.
Methods: An interdisciplinary team consisting of nurses, clinical pharmacists, rheumatologists, and a GP was established. A patient representative was also involved in a pilot for MR at the hospital. Multiple initiative were introduced: the patient was asked in the referral letter to bring his/her own updated complete medication list, the electronic patient journal's template for medication list both in the admission note and in the discharge note were revised to clarify medication changes during the stay, and the nurses were especially trained by the pharmacist in the process of MR. In the one year study period all elective patients were asked at admission if they had brought their medication list. MDs between the list obtained by the structured interview and the medication chart obtained by the physician at admission were discussed with the rheumatologist in charge. The rheumatologist adjusted the medication chart at her/his appraisal and eventually the medication list was complete. The extent and type of MDs were registered during a 6-month period (March-September). The quality of the medication information in the discharge note was assessed according to a predefined scale developed by the Norwegian National Patient Safety Program, *In safe hands 24-7*, (1-12 points 12 being the best) with regard to completeness of medication information (name, strength, dosage, route of administration), indication, dose escalation/reduction, discontinuation, commencement of a new drug.
Results: From January to December 2014, 252 (37%) of the elective patients brought their own medication list at admission. In this 12-month period MR was performed for 356 patients (both elective and acute patients), 41% of the total admissions. During the 6-month registration period a total of 417 MDs were revealed for 133 patients (3.2 per patient), and 89% of the patients had one or more MDs. The most frequent type of MD was omission of a drug. The mean score of quality of the medication information in the discharge note increased from 7.7 at baseline to 8.9 of 12 possible points after one year.
Conclusions: It is a challenge to implement MR in daily clinical practice. This interdisciplinary quality assurance task should be highly prioritised, as it showed that the interdisciplinary structured MR increases the quality of the medication list which is important with regard to further assessment and treatment of the patient, especially when changing level of care.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2015-eular.3376