SAT0725-HPR

COMPARATIVE ANALYSES OF RESPONSIVENESS BETWEEN THE RHEUMATOID ARTHRITIS IMPACT OF DISEASE (RAID) SCORE, OTHER REPORTED OUTCOMES AND DISEASE ACTIVITY MEASURES: SECONDARY ANALYSES FROM THE ARCTIC STUDY

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Background: The RAID score is a patient-derived patient reported outcome measure (PROM), developed by a EULAR task force, that assesses the impact of RA on seven important domains. Responsiveness of the RAID score was assessed in the preliminary validation,1 but more data is needed on the sensitivity to change, especially compared to other PROMs and conventional outcome measures.

Objectives: The objective of this study was to assess the changes in the RAID score in patients with early RA during the first six months of intensive DMARD treatment, and to evaluate the responsiveness of RAID after 3 months compared to other PROMs and conventional measures of disease activity.

Methods: RA patients with short disease duration were followed in the 24 month treat-to-target strategy ARCTIC trial.2 The responsiveness of the RAID score was evaluated by calculating the Standardised Response Mean (SRM) followed by the Relative Efficiency (RE) with respect to the Ritchie Articular Index. SRMs and RE were also calculated for other PROMs and clinical outcome measures. An SRM with absolute value above 0.80 was considered high.

Results: 230 RA patients were included. The mean symptom duration was 7.09 ± 5.40 (±SD) months, at 3 months follow-up, the mean change score for RAID was −2.25 ± 1.98 and the SRM was −1.13 (−1.33 to −0.96) (table 1).

Table Mean change±SD and standardised response mean (SRM) with 95% confidence intervals for patients reported outcomes and conventional disease activity measures at 3 and 6 months

<table>
<thead>
<tr>
<th>Measure</th>
<th>3 months</th>
<th>6 months</th>
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<tbody>
<tr>
<td>Change, mean±SD SRM (95% CI)</td>
<td></td>
<td></td>
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<tr>
<td>RAID</td>
<td>−2.25±1.98</td>
<td>−1.13 (−1.33 to −1.86)</td>
</tr>
<tr>
<td>DAS</td>
<td>−1.71±1.04</td>
<td>−0.63 (−1.24 to −0.12)</td>
</tr>
<tr>
<td>ESR</td>
<td>−10.9±5.0</td>
<td>−0.63 (−0.83 to −0.23)</td>
</tr>
<tr>
<td>CRP</td>
<td>9.6±8.18</td>
<td>−0.43 (−0.62 to −0.13)</td>
</tr>
<tr>
<td>Swollen joint count</td>
<td>−8.86±6.89</td>
<td>−1.14 (−1.48 to −0.80)</td>
</tr>
<tr>
<td>Ritchie Articular Index</td>
<td>5.75±6.03</td>
<td>0.40 (−0.11 to 0.75)</td>
</tr>
<tr>
<td>Patient global assessment VAS</td>
<td>−28.3±22.4</td>
<td>−1.17 (−1.65 to −0.60)</td>
</tr>
<tr>
<td>Physician global assessment VAS</td>
<td>−26.2±19.2</td>
<td>−1.37 (−1.54 to −1.13)</td>
</tr>
<tr>
<td>PROMIS physical function</td>
<td>14.8±13.7</td>
<td>0.86 (−0.96 to 2.62)</td>
</tr>
<tr>
<td>Fatigue VAS</td>
<td>−13.3±29.3</td>
<td>−0.45 (−0.60 to −0.12)</td>
</tr>
<tr>
<td>Joint pain VAS</td>
<td>−27.7±24.4</td>
<td>−0.98 (−1.09 to −0.87)</td>
</tr>
<tr>
<td>SF-36 Physical component</td>
<td>8.99±9.02</td>
<td>1.00 (0.84 to 1.22)</td>
</tr>
<tr>
<td>SF-36 Mental component</td>
<td>3.89±10.6</td>
<td>0.37 (−0.23 to 0.50)</td>
</tr>
</tbody>
</table>

Conclusions: The RAID score proved to be highly responsive to change in RA patients with short disease duration who followed a treat-to-target strategy. The RAID score was efficient in detecting change compared to other PROMs and conventional disease activity measures.

REFERENCES:

p<0.01), and between the 6MWT distance and quality of life (R=0.62, p<0.01), and between DASH and quality of life (R=−0.48, p<0.03).

Conclusions: AHSC enhances the functional status of SSc patients, significantly improving skin involvement, hand function, physical capacity and quality of life. These results can be interpreted as positive outcomes of AHSC for SSc.

REFERENCES:

Disclosure of Interest: None declared

SAT0727-HPR CRITERION VALIDITY AND RELIABILITY OF A SUBMAXIMAL TREADMILL TEST IN JUVENILE IDIOPATHIC ARTHRITIS PATIENTS

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Background: For both research purposes and daily clinical practice, a feasible exercise test with acceptable measurement properties is needed to measure exercise capacity in juvenile idiopathic arthritic (JIA) patients.

Objectives: To evaluate the criterion-validity, test-retest reliability and inter-rater reliability of an eight-minute submaximal treadmill test, which can be used to esti-

mate VO2peak1, in JIA patients.

Methods: 59 patients with oligo- (n=30) and polyarticular (n=29) JIA (mean age (SD) 13.6 (2.2), 50 girls) participated in this study. They performed a maximal treadmill test until exhaustion to measure the VO2peak directly and the eight-

minute submaximal treadmill test to estimate the VO2peak. A standardised formula was used to estimate the VO2peak1. To evaluate the reliability, 37 patients also per-

formed the submaximal treadmill test twice on the same day 1 week after the initial test. Paired t-tests were used to test potential differences between the tests. Criterion validity and reliability were evaluated with two ways mixed interclass cor-

relation coefficient (ICC). Limits of agreement (LoA) (Bland and Altman method), standard error of measurement (SEM) and smallest detectable change (SDC) were calculated to evaluate the measurement error of the sub-

maximal treadmill test.

Results: No significant difference was found between the observed and esti-

mated VO2peak (mL·kg−1·min−1), 44.8 (8.8) vs 43.2 (10.3) respectively, p=0.18. The single ICC (95% CI) value at individual level between the estimated and measured VO2peak was moderate; ICC 0.55 (0.34–0.70) while the ICC at group level was good; 0.71 (0.51–0.82). The measurement errors were large (SEM 6.5 and SDC 18.0). The single ICC value for test-retest reliability and interrater reliability were good to excellent, 0.84 (0.71–0.91) and 0.92 (0.83–0.96), respectively. The ICC value at group level for test-retest reliability and interrater reliability were excellent, 0.91 (0.83–0.96) and 0.96 (0.91–0.98), respectively. There were no significant dif-

ferences between estimated VO2peak (mL·kg−1·min−1) when comparing the results from the three performed submaximal treadmill tests. The measurement errors were moderate/large for both test-retest reliability and interrater reliability (table 1). The Bland Altman plots showed no systematic differences, but confirmed the large variability for both the validity and reliability (figure 1).

Table. Reliability and measurement error of the submaximal treadmill test

<table>
<thead>
<tr>
<th>Test</th>
<th>Retest</th>
<th>Difference</th>
<th>SEM</th>
<th>LoA</th>
<th>SDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>Retest</td>
<td>Diff</td>
<td>SEM</td>
<td>LoA</td>
<td>SDC</td>
</tr>
<tr>
<td>Est VO2peak (mL·kg−1·min−1)</td>
<td>44.9 (9.4)</td>
<td>44.3</td>
<td>0.6 (5.9)</td>
<td>4.1</td>
<td>−11.9</td>
</tr>
<tr>
<td>Tester 1</td>
<td>Tester 2</td>
<td>Diff</td>
<td>SEM</td>
<td>LoA</td>
<td>SDC</td>
</tr>
<tr>
<td>Est VO2peak (mL·kg−1·min−1)</td>
<td>44.3</td>
<td>43.7</td>
<td>1.6 (4.1)</td>
<td>3.1</td>
<td>−6.4–9.7</td>
</tr>
</tbody>
</table>

*Values are mean (SD).

Conclusions: The submaximal treadmill test is valid for use in JIA patients on group level, but showed only moderate validity on an individual level. The test-

retest and intra-rater reliability is good to excellent; however, the measurement errors are large. Our findings indicate that the submaximal treadmill test is not opti-

mal for use in daily clinical practice to estimate VO2peak in individual patients and it is important to be aware of the large measurement errors.

REFERENCE:

Disclosure of Interest: None declared

SAT0728-HPR EVALUATION OF THE EFFECTIVENESS OF AN EDUCATIONAL PROGRAM IN PATIENTS WITH OSTEOARTHRITIS OF THE KNEES

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Background: Osteoarthritis (OA) is the most common chronic joint disease, affecting about 50% of the population aged 65 or over, its incidence tends to increase according to the age.

Educational intervention is considered an important part of treatments for chronic diseases. However, in the literature, for OA there is still no standard of educational program to be followed.

Objectives: To evaluate the effectiveness of the educational intervention in patients with knee osteoarthritis regarding to pain, function, anxiety and quality of life.

Methods: Sixty patients with knee OA, both genders and age between 40 to 80 years, were included. The patients were randomised into 2 groups: Experimental Group (EG) received an educational intervention, composed of 5 consecutive ses-
sions held once a week, with a duration of 60 min each session. At the end of the last class, a booklet was given to each patient with all the content of the classes.

In addition to the educational program, this EG also received a TENS (Transcuta-

neous Nerve Electrical Stimulation) treatment performed twice a week for 5 weeks for 40 min each session. Control group (CG) received the same TENS treatment as EG group.

The evaluations were performed at baseline, 1 and 12 weeks after baseline with the following instruments: numerical pain scale (NPS) for pain; WOMAC question-

naire and 6 min walk test for function; IDATE questionnaire for anxiety and SF-36 questionnaire for quality of life.

Results: Regarding the variables pain, function, anxiety and quality of life, no statistically significant difference was found between groups over time. (table 1) The intragroup comparisons show no improvement in both groups between T0 and T4 and T0 and T12for: pain; function total and pain score of WOMAC and domains physical role functioning and social role functioning of SF-36 (table 1)