Changes in Patient Reported Symptoms During the Natural Progression of Osteoarthritis

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Keywords
Osteoarthritis, Physical activity, WOMAC, SF-36

Comments
Poster presented on Senior Scholars Program Poster Presentation Day at the University of Massachusetts Medical School, Worcester, MA, on April 30, 2014. Medical student Matthew C. DeWolf participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

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Changes in Patient Reported Symptoms During the Natural Progression of Osteoarthritis
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BACKGROUND
Arthritis is the leading cause of disability and second most costly chronic condition in the United States (1 & 2). Physical Activity is a challenge in patients with OA (3).

We quantitated the patient-reported changes in pain and function during the natural progression of OA and correlated these metrics with objective activity monitors.

RESULTS

Basic Demographics
- Average Age: 57 years
- 80% had 1 or fewer medical co-morbidities
- 4% used an assistive device
- Average BMI: 33.85

Activity Monitor:
- Trend of increased % day sedentary, decreased steps/day.

Table 1: Objective data from activPAL™ the initial 19 patients enrolled.

<table>
<thead>
<tr>
<th></th>
<th>%SED</th>
<th>%STAND</th>
<th>%STEP</th>
<th>STEPS</th>
<th>STEP RATE (steps per minute)</th>
<th>MVPA (min)/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>62.6 ± 2.39</td>
<td>28.0 ± 1.98</td>
<td>9.2 ± 0.78</td>
<td>6446 ± 570</td>
<td>37.7 ± 0.94</td>
<td>52.6 ± 4.79</td>
</tr>
<tr>
<td>3-Mos</td>
<td>63.0 ± 2.40</td>
<td>28.0 ± 1.99</td>
<td>8.1 ± 0.79*</td>
<td>5359 ± 572*</td>
<td>36.6 ± 0.94*</td>
<td>42.6 ± 4.80*</td>
</tr>
<tr>
<td>6-Mos</td>
<td>62.6 ± 2.40</td>
<td>28.7 ± 1.98</td>
<td>8.7 ± 0.78</td>
<td>5668 ± 570</td>
<td>37.3 ± 0.94</td>
<td>47.1 ± 4.79*</td>
</tr>
<tr>
<td>9-Mos</td>
<td>67.1 ± 2.40*</td>
<td>24.7 ± 1.99</td>
<td>8.1 ± 0.79*</td>
<td>5322 ± 572*</td>
<td>37.3 ± 0.94</td>
<td>43.5 ± 4.80*</td>
</tr>
</tbody>
</table>

*Significantly different from baseline (p<0.05)

REFERENCES:

DISCUSSION

- Patient-reported function did not change over a 9-month period. However, preliminary objective activity data suggests a decline.
- Further analyses will correlate patient-reported measures with objective measures recorded by activity monitors to determine if objective monitors are preferable to detect early changes in activity due to OA.