Changes in Patient Reported Symptoms During the Natural Progression of Osteoarthritis

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Keywords
Osteoarthritis, Physical activity, WOMAC, SF-36

Comments
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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.

MATERIALS & METHODS
50 patients who were undergoing non-operative management of OA were enrolled.

Visit Intervals: Baseline, 3 months, 6 months, 9 months

Data Collection:
• Basic Demographics
• Patient Reported Outcomes: SF-36, WOMAC, Charlson Co-Morbidity Index
• Objective Measures: ActiGraph and activPal

* Worn for 7 days after visit

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>MVPFA (min/tes)</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>63.9 ± 2.40</td>
<td>28.0 ± 1.99</td>
<td>8.1 ± 0.79*</td>
<td>5369 ± 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>5688 ± 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)

Patient - reported Measures:
- WOMAC Function: Average=68; NO change over time (0-100; moderate limitations)
- SF-36: Average PCS = 38; NO change over time (0-100; moderate limitations)
- If WOMAC Pain Score <80 (moderate pain); average SF36 PCS =36
- If WOMAC Pain Score >80 (mild pain); SF36 PCS =42.5

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.

REFERENCES: