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Changes in Patient Reported Symptoms During the Natural Progression of Osteoarthritis

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Keywords

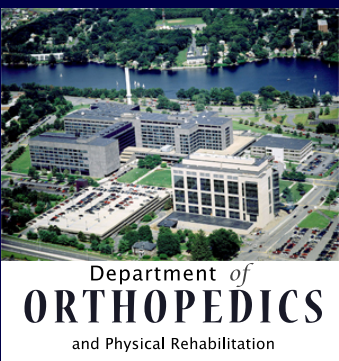
Osteoarthritis, Physical activity, WOMAC, SF-36

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.



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.

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

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

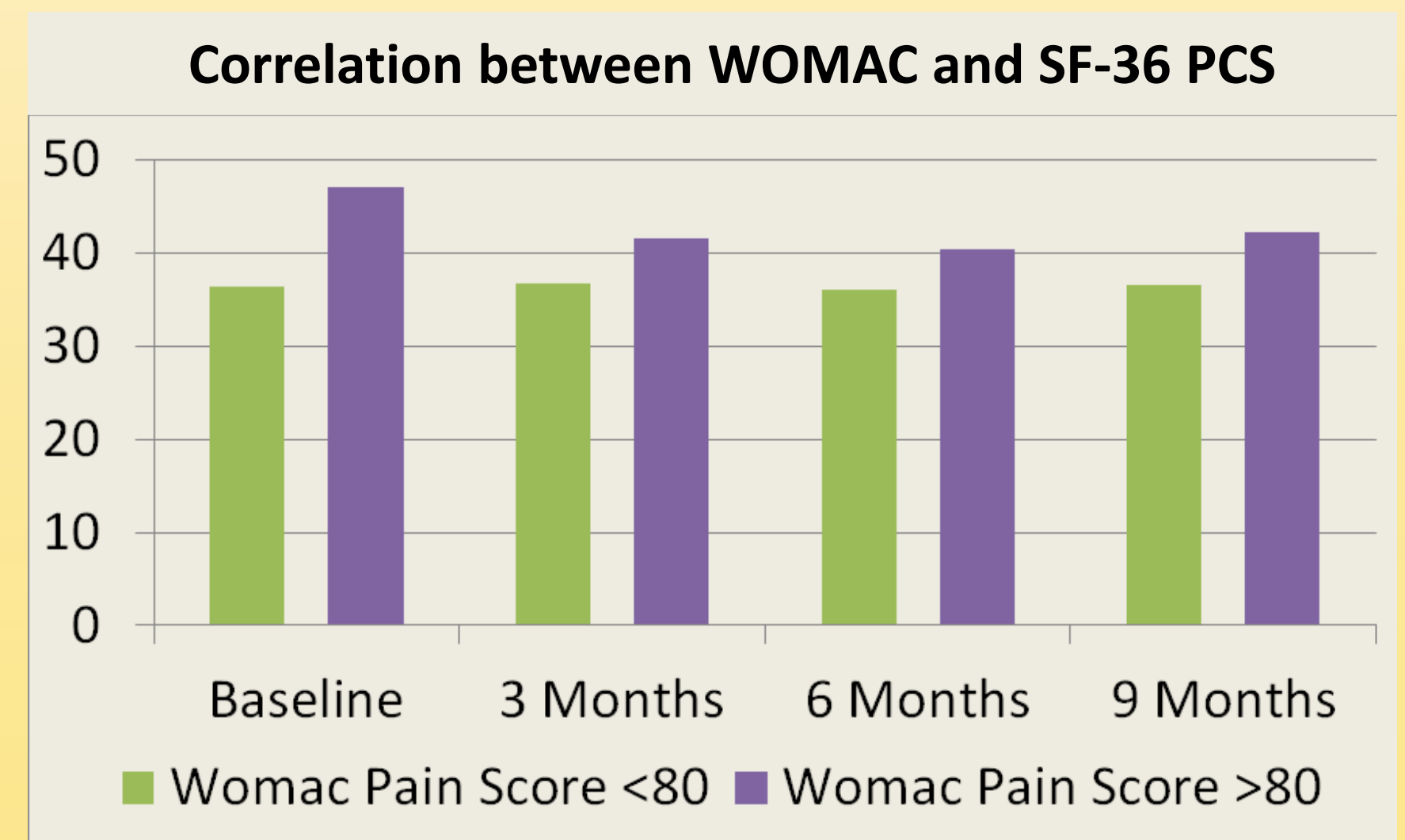
	%SED	%STAND	%STEP	STEPS	STEP RATE (steps per minute)	MVPA (minutes)
Baseline	62.8 ± 2.39	28.0 ± 1.98	9.2 ± 0.78	6446 ± 570	37.7 ± 0.94	52.6 ± 4.79
3-Mos	63.9 ± 2.40	28.0 ± 1.99	8.1 ± 0.79*	5359 ± 572*	36.6 ± 0.94*	42.6 ± 4.80*
6-Mos	62.6 ± 2.40	28.7 ± 1.98	8.7 ± 0.78	5868 ± 570	37.3 ± 0.94	47.1 ± 4.79*
9-Mos	67.1 ± 2.40*	24.7 ± 1.99	8.1 ± 0.79*	5322 ± 572*	37.3 ± 0.94	43.5 ± 4.80*

*Significantly different from baseline (p<0.05)

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.

Figure 1: Difference in SF-36 PCS between patients starting with a WOMAC Pain Score <80 and those starting with a WOMAC Pain Score >80, displayed at the 4 different study time points.



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