A Modified Activity Protocol for Claudication
“The FITBIT Study”

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Background

- For patients with intermittent claudication, supervised exercise therapy (SET) has been shown to be beneficial over non-supervised exercise therapy to improve walking distance

- Supervised exercise therapy versus non-supervised exercise therapy for intermittent claudication (The Cochrane Collaboration)
  - Review of 14 studies that compared patients with intermittent claudication treated with SET versus non-SET
  - Noted a statistically significant improvement in maximal treadmill walking distance in patients with SET at 3 and 6 months
  - Average increase in walking distance 180 meters

Background

- FITBIT (Fitbit Inc.)
  - Battery powered
  - Electronic monitoring device
  - Clips to belt, waistband, or pocket
  - Tracks detailed data for 7 days
    - Steps
    - Distance
    - Floors climbed
    - Calories burned
    - Active minutes
  - Tracks totals for 30 days
  - Wirelessly sync to computers and cell phones

Research Objective

- Can a FITBIT device serve as a monitoring technique to supplant a supervised exercise training program in patients with intermittent claudication?

Nothing to disclose
Hypothesis

• Using a FITBIT device would improve daily walking distance

Methods

(Initial Visit)

• Recruitment
  – Veterans Affairs Medical Center, Washington DC
  – Vascular surgery clinic

• Initial Survey
  – Brief medical and surgical history
  – Current physical activity level
  – Current symptoms

• Patient Education
  – Counseled on walking program
  – FITBIT use

Methods

(Monthly Follow-up visits)

• FITBIT interrogated

• Patient education
  – Monthly results of FITBIT activity
  – Counseled on walking program

• Final survey (at 6 months)
  – Current physical activity level
  – Current symptoms
  – Usefulness of the device

Methods

• Number of steps taken month 1 compared to number of steps taken month 6 using student-t test and confidence intervals (significant p=0.05)

Interim Results

Enrollment

• Plan to enroll 50 patients

• Current enrollment at 41 patients
  – 10 completed study
  – 21 patients dropped out
  – 10 active participants

Patient Demographics

• Risk factors
  – 9 Diabetes Mellitus
  – 10 Hypertension
  – 10 Hyperlipidemia
  – 10 former or current smokers (3 current)

• Medical management
  – 6 cilastazol

• Surgical management
  – 2 previous revascularizations
Interim Results

Completed studies

Survey Analysis

• 6 stated walking improved
• 10 stated they were encouraged to walk more frequently and farther
• 9 stated that they made healthier choices

Limitations

• Interim results
• Small cohort
• Designed as an observational study only
• Large drop out and loss rate

Preliminary Observations

• Though participants perceived an improvement in walking, the FITBIT was not an effective replacement for SET
• Plan completion of participants and reanalysis of our data over the next 6 months
• Benefit in looking at devices with better feedback or in combination with SET

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