**INTRODUCTION**

- Between 50-70% of individuals with Type II Diabetes Mellitus (T2DM) have diabetic peripheral neuropathy (DPN).  
- DPN, the most common complication arising from T2DM, is characterized by impaired balance, functional mobility, pain, and sensory loss.  
- While activities of daily living and quality of life are negatively impacted by DPN few effective interventions address this condition.  
- The primary aim of this study was to examine the effects of short-term (4 weeks) focal muscle vibration (FMV) on pain, balance, and mobility in individuals with DPN.  
- The secondary aim of this study was to assess whether baseline level of pain is associated with the intervention effects of FMV.

**METHODS**

**Outcome Measures**

- Berg Balance Scale (BBS)  
- Cognitive and standard Timed-Up and Go (TUG)  
- Brief Pain Inventory – Diabetic Peripheral Neuropathy (BPI-DPN)  
- Semmes Weinstein Monofilament Test (SWMT) with the 5.07 (10g) filament

**Subjects**

- Thirteen participants met the inclusion criteria for this ongoing study, which included: diagnosis of Type II Diabetes Mellitus, secondary diagnosis of DPN of a one-year duration, age ≥18 years, independent ambulation, lack of other comorbidities, English-speaking, and normal/corrected vision.

- We categorized participants into three groups based on baseline pain level: Mild (0-3), Moderate (4-6), and Severe (7-10).

**Data Analysis**

- We applied vibration to each muscle 10 times (total 30 minutes on each leg), with an inter-session interval of one minute for every 10-minute session per muscle, 3 days/week, for 4 weeks.

- Paired t-tests or Wilcoxon signed-rank test when data are not normally distributed.

**RESULTS**

- After intervention we found significant improvements in: TUG scores (p=0.0036), TUG cognitive scores (p<0.001), SWMT (p=0.0389), and in the average pain subscale (p=0.03)

**DISCUSSIONS AND CONCLUSIONS**

- Findings show that FMV significantly improves mobility, pain, and sensation.

- Improvement in average pain and walking ability subscases of BPI-DPN corroborates improvement in mobility and overall pain

- Limitations: small sample size, large variation not normally distributed All values represented as mean (SD)

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**LITERATURE CITED**