



Improvement in balance, coordination, and mental clarity following a program of vestibular rehabilitation and spinal manipulative therapy



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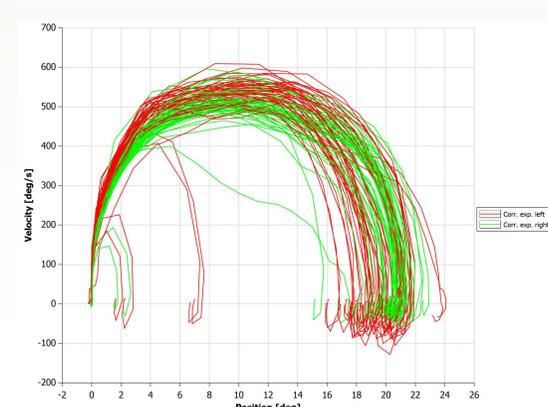
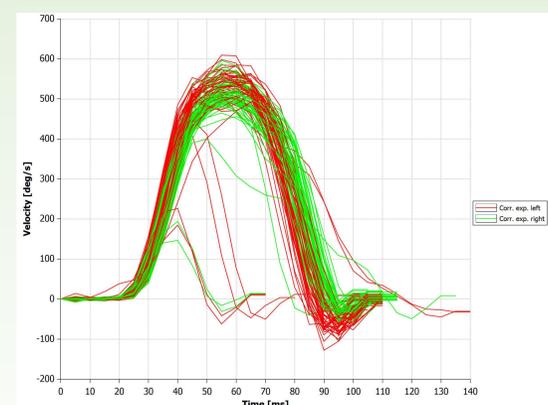
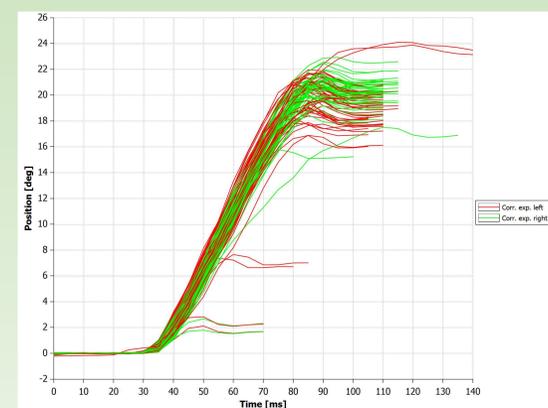
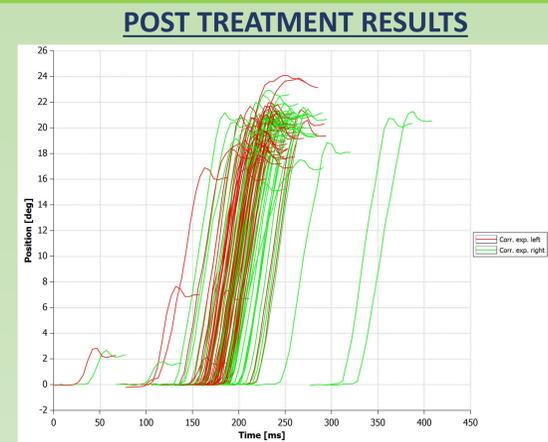
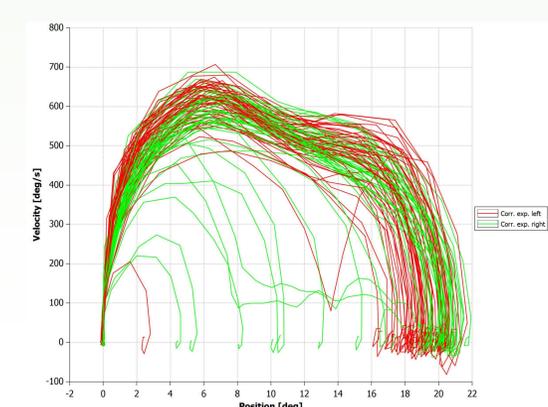
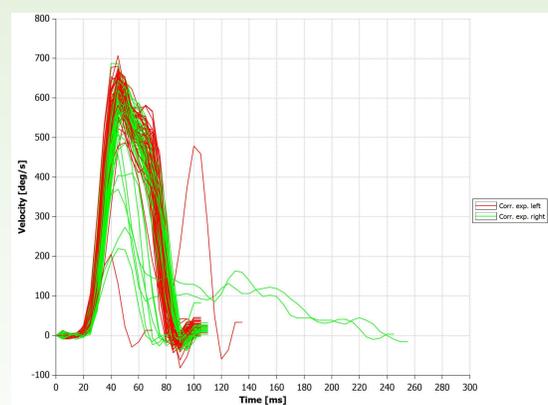
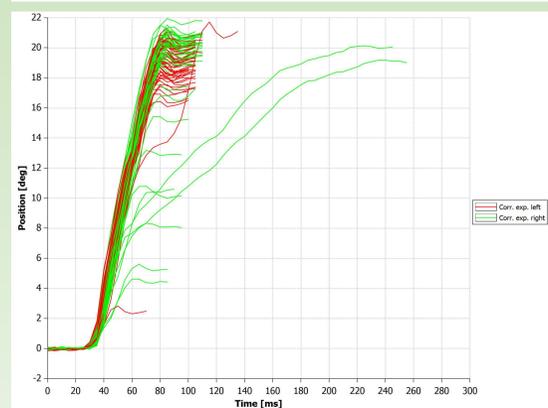
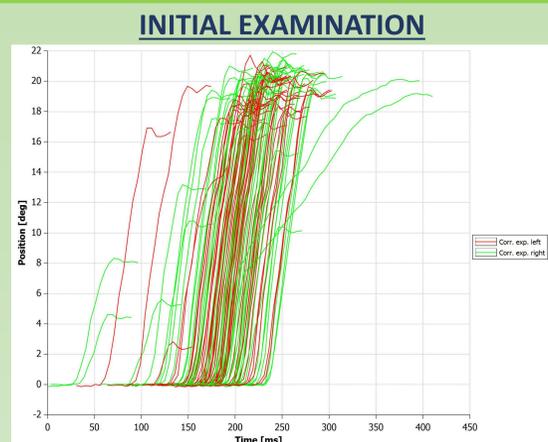
INTRODUCTION

A 45-year-old female presented to the clinic with multiple symptoms including fatigue and mental sluggishness which she described as “brain fog,” “not being able to remember things” as well as difficulty with “finding words to use in normal conversation.” She also described “tripping while using stairs” at a frequency of at least once per week.

METHODS

Saccodometry revealed a heteroscedastic distribution of 100 saccades in terms of latency, velocity and accuracy. Neurological examination revealed abnormal sway in Romberg’s position, positive Fakuda’s test, abnormal optokinetics, and dysmetria and intention tremor with finger-to-nose testing. She was unable to perform a sharpened Romberg’s test without losing balance. A program of multimodal neurorehabilitation included vestibular rehabilitation (VR) and spinal manipulative therapy (SMT). VR included gaze-holding exercises, passive and active vestibular canal stimulation, and unilateral multi-planar (complex) upper and lower extremity movements. A home program included gaze-holding exercises, combinations of computer aided pursuits and saccades, and unilateral balance exercises on firm and perturbed surfaces.

RESULTS



RESULTS

The multimodal rehabilitation program consisted of 15 treatments over 11 weeks at a twice-per-week frequency. Treatment also consisted of dietary changes to reduce inflammation.

After treatment, the latency, velocity, and amplitude improved and the distributions of 100 saccades became more homoscedastic. The patient reported improvement in balance where the frequency of incoordination including “tripping while using stairs” reduced to once per month versus once per week. The patient reported improvement in mental sluggishness and fatigue with improved cognition and a reduction in “brain fog.” Romberg’s, sharpened Romberg’s, Fakuda’s, OPK and finger-to-nose testing all normalized.

CONCLUSION

This author recommends further investigation into the relationship between the improvement of mental sluggishness, balance and coordination with the improvement in latency, velocity and accuracy of saccades following a program of multimodal neurorehabilitation which includes VR and SMT.

For more information contact

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