

Considerations for Recommended Treatment Intervals following Osteopathic Manipulative Treatment

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BACKGROUND: In previous studies quantifiable changes in cervical hysteresis characteristics post-osteopathic manipulative treatment (OMT) were documented using a durometer (Ultralign SA201[®]; Sigma Instruments; Cranberry, PA). This study was designed to narrow its focus by comparing two treatment modalities, Muscle Energy (ME) and High-Velocity Low-Amplitude (HVLA), and by only treating one of the three most common dysfunctional segments as found in the previous study. This study allowed subjects to re-enroll, provided they could be treated using the alternate treatment modality. By allowing repeat subjects, further analysis of the data for lasting treatment effects could be observed as well as further assessment of changes made after a second treatment. The four components used to calculate a durometer (*Motoricity, Mobility, Frequency, and Fixation*) were used to analyze and document change in cervical hysteresis after OMT.

HYPOTHESIS: An objective change would be observed in repeat subjects after each treatment.

METHODS: 34 subjects were extracted from a larger, 213 subject study. Subject were randomly assigned to receive single-segmental ME or HVLA directed toward C3, C4, or C5. The segment treated was considered, by the treating physician, to have the most significant somatic dysfunction. Each subject was treated with both treatment modalities approximately 7-10 days apart. All subjects were objectively measured using the Ultralign SA201[®], treated with cervical OMT, and reassessed with the Ultralign SA201[®] post treatment.

RESULTS: Statistically significant or suggestive changes were noted in all four durometer components after the first treatment in cervical levels OA-C3 (p-values=0.01-0.08) with good clinical effect size ≥ 0.31 . However, following the second treatment, only cervical level AA showed statistical significance change (p-value=0.01) with clinical effect size of 0.45 in the frequency component, while all other cervical levels demonstrated no statistical significance (p-values ≥ 0.20). When distinguishing if a difference existed between the first post-treatment values compared to the second pretreatment values no statistically significant difference was noted (p-values ≥ 0.09).

CONCLUSION: When comparing OMT changes after the first treatment to the post-OMT changes before the second treatment, the data suggests that OMT changes after the first treatment were still in effect 7-10 days following treatment. This data suggests that subsequent patient follow up of less than 2 weeks may not be an optimal treatment interval.