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## Title

*A standardized osteopathic manipulative technique for the treatment of chronic migraine headaches*

## Priority 1 (Research Category)

Clinical research (other)

## Presenters

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## Abstract

Context: In the US, 40 million people suffer from migraines; 8% have debilitating chronic migraines (CM). Standard care such as topiramate, onabotulinumtoxin A, and calcitonin gene-related peptide monoclonal antibodies are not universally effective and cause adverse effects (AE). Non-pharmacologic treatments such as osteopathic manipulative treatment (OMT) are reported effective and may minimize AEs but current studies are limited by non-uniformity of treatment protocols. Objective: To evaluate the feasibility of a standardized OMT procedure for CM and gather preliminary data on its effectiveness in a primary care setting. Study Design & Analysis: Prospective, single-arm feasibility study. Changes were evaluated using MANOVA to 95% confidence with f distribution for effect size. Setting: Outpatient clinical research center. Population Studied: Adults aged 18 to 60 seen within the last three years for chronic migraine (ICD 10 code G43.709) with no recent or ongoing treatment with topiramate or onabotulinumtoxin A. Intervention/Instrument: Participants received up to 5 biweekly treatments (minimum 3) of five 1-minute standardized myofascial release movements and completed 1- and 3-month post-treatment assessments. Outcome Measures: Primary: study completion rate and treatment satisfaction. Secondary: changes between baseline and 1-month, and baseline and 3-month scores on: Headache Impact Test (HIT-6) and the Migraine Specific Quality of Life Questionnaire (MSQ); changes between baseline and 3-month score on the Migraine Disability Assessment Test (MIDAS). Results: All 11 participants (mean age 47 years; 10 female, 1 male) completed the baseline, 1-, and 3-month assessments and ≥3 treatments. Treatment satisfaction was high (4.7/5). Improvements between baseline and 1-month were: HIT-6: 3.4->3.1 ($p<.05$, $\eta p2=0.16$ (large effect)); MSQ: 2.9->2.2 ($p=.087$, $\eta p2=0.12$ (medium effect)). Improvements between baseline and 3-month were: HIT-6: 3.4->2.9 ($p=.074$, $\eta p2=0.13$ (medium effect)); MSQ: 2.9->2.0 ($p=0.39$, $\eta p2=0.09$ (medium effect)); MIDAS: 9.1->5.6 ($p<.05$, $\eta p2=0.19$ (large effect)). Conclusions: A standardized OMT protocol is feasible for chronic migraine treatment, with significant large effect size improvements on HIT-6 and MIDAS scores, and non-significant but medium effect size improvement on the MSQ. Improvements on the HIT-6 and MSQ

wane over time. Further studies are warranted to confirm generalizability and characterize the extinction coefficient of efficacy.