Researchers in the Department of Sleep Medicine at the Pitié-Salpêtrière Hospital in Paris, France, evaluated the effect of osteopathic manipulation on upper airway stabilization in patients with obstructive sleep apnea syndrome (OSAS). In this proof-of-concept crossover study, 9 patients (7 men, 2 women) were randomly assigned to active manipulation (AM) or sham manipulation (SM). Some patients received the AM at visit 1 and PM at visit 3, and others received PM at visit 1 and AM at visit 3. Each patient was his or her own control.

Inclusion criteria were age at least 18 years with OSAS and an apnea-hypopnea index of at least 15/h and no more than 45/h. Patients were excluded if they were treated by nocturnal continuous positive airway pressure or mandibular advancement devices and were unable to temporarily stop this treatment for the purposes of the study. Patients who had complete nasal obstruction, were treated with serotonin reuptake inhibitors, or had a body mass index greater than 40 were also excluded.

The description of the AM was consistent with a commonly used intraoral osteopathic cranial manipulative medicine procedure called the spheno-palatine ganglion release. The SM consisted of hand placement in the same respective positions as for the AM, but the fifth digit was not advanced to the pterygoid process and the finger pressure was lateral toward the oral mucosa. Both the patient and the investigator analyzing the data were blinded to the intervention (AM or SM), and the osteopath who applied all of the interventions was not involved in data analysis.

The primary outcome measure was the percentage of responding patients presenting pharyngeal stability defined by an improvement of critical closing pressure (Pcrit) of at least $-4$ cm H$_2$O at 30 minutes after the intervention. Pcrit was measured at baseline, 30 minutes, and 48 hours after the intervention.

Nine patients were included in the study, but only 7 completed the primary outcome measures. At 30 minutes, the percentage of AM responders (5 of 7) was significantly higher than SM responders (0 of 7) ($P=0.0209$). Four of the AM responders at 30 minutes were still responders at 48 hours. Other findings were that AM produced more intense pain ($P=0.0089$) and increased lacrimation. This novel study suggests positive clinical applications of osteopathic cranial manipulative medicine if subsequent research confirms these findings. (doi:10.7556/jaoa.2018.070)

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Fibromyalgia Symptoms Reduced by Osteopathic Manipulative Medicine and Gabapentin


Researchers at the Touro University College of Osteopathic Medicine-CA in Vallejo compared outcomes of gabapentin only, osteopathic manipulative medicine (specifically osteopathic manipulative treatment [OMT]), and gabapentin plus OMT interventions in patients with fibromyalgia. Inclusion criteria were as follows: ages 18 to 65 years, diagnosis of fibromyalgia consistent with the American College of Rheumatology (ACR) 1990 criteria, pain present for at least 3 months, and pain in 11 of 18 tender points positive by Dolorimetry. This study was carried out before the 2010 ACR fibromyalgia criteria were published, but the authors note that all patients would have met the 2010 ACR criteria. Exclusion criteria included pain from traumatic
injury or structural or regional rheumatic disease, rheumatoid or inflammatory arthritis, or autoimmune disease; significant psychiatric disease or dementia; substance abuse in past 6 months; and breastfeeding or pregnancy.

Participants were randomly assigned to 1 of 3 groups: gabapentin only (900 mg/d), OMT only, or combined gabapentin and OMT. Participants had weekly visits for 6 weeks and a follow-up visit at 8 weeks. Outcome measures included Wong-Baker FACES Pain Rating Scale, Clinical Global Impression of Health, Fibromyalgia Impact Questionnaire, and number of tender points.

Twenty-nine of 35 participants completed the trial: 8 received gabapentin only, 11 received OMT only, and 10 received combined OMT and gabapentin. The OMT was administered by “advanced” osteopathic medical students under supervision for 30 minutes, and the OMT techniques used included myofascial release, muscle energy, counterstrain, facilitated positional release, articular ligamentous, high-velocity/low-amplitude, and osteopathic cranial manipulative medicine. These techniques were administered based on structural examination findings at each visit.

Participants who received OMT alone or combined OMT and gabapentin displayed clinical improvements in the pain scale scores ($P<.01$ and $P=.03$, respectively), whereas the change for the gabapentin-only group was insignificant. The OMT-only group was the only group to have a significant decline in scores on the Clinical Global Impressions of Health scale ($P<.01$). Changes in scores on the Fibromyalgia Impact Questionnaire and number of tender points were insignificant. No differences across groups were statistically significant, which was not surprising given the small sample size of this feasibility study. The authors note that gabapentin, an off-label but commonly used intervention, and OMT were safe and clinically efficacious in this population. (doi:10.7556/jaoa.2018.071)

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Myofascial Release Therapy Beneficial for Patients With Chronic Low Back Pain


Multimodal osteopathic manipulative treatment is efficacious for chronic low back pain (LBP). However, systematic reviews have excluded osteopathic studies that have used multimodal treatments because they do not assess each technique individually. Researchers in Spain performed a double-blind randomized sham-controlled trial to evaluate the effects of using only myofascial release (MFR) therapy on pain level (using the Short Form McGill Pain Questionnaire [SF-MPQ] and Visual Analog Scale [VAS]), disability (using the Roland-Morris Questionnaire), and fear-avoidance beliefs (using the Fear-Avoidance Belief Questionnaire) in patients with chronic LBP.

Researchers recruited 54 adults (33 women, 21 men) aged 18 to 60 years with nonspecific chronic (>3 months) LBP. Exclusion criteria were pregnancy, spinal infection or tumors, systemic diseases, fibromyalgia, cauda equina syndrome, spine surgery, musculoskeletal injuries, previous MFR treatment, or rehabilitation treatment for back pain within the past 2 months. Although all participants could continue with their pharmaceutical therapies, no other information regarding these therapies was provided.

Patients were randomly assigned to the MFR...