Osteopathic manipulative treatment including specific diaphragm techniques improves pain and disability in chronic non-specific low back pain: A Randomized Clinical Trial

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BACKGROUND: In addition to its respiratory function, the diaphragm also plays an important role in stabilizing the spine during postural, balance, and load-bearing activities, and so it is reasonable to assume that diaphragm dysfunction could also provoke low back disorders [1,2,3]. Up to this moment, no previous studies have evaluated the efficacy of diaphragm-centered osteopathic manipulative treatment (OMT) for improving non-specific chronic low back pain (NS-CLBP). The purpose of this study is to investigate the effects of an OMT protocol including diaphragm interventions compared to the same OMT with a sham-diaphragm intervention, on pain and disability in patients with NS-CLBP.

METHODS: Sixty-six subjects, with NS-CLBP, were randomized to receive either an OMT protocol including specific diaphragm techniques (n=33) or the same OMT protocol with a sham-diaphragm intervention (n=33), conducted in five sessions provided during 4 weeks. Variables studied were pain [evaluated with the Short-Form McGill Pain Questionnaire (SF-MPQ) and the Visual Analogue Scale (VAS)] and disability [assessed with the Roland Morris Questionnaire (RMQ) and the Oswestry Disability Index (ODI)]. All outcome measures were evaluated at baseline, at week 4, and at week 12.

RESULTS: A statistically significant reduction was observed in the experimental group compared to the sham group, in all variables assessed at week 4 and at week 12 [SF-MPQ (MD −6.2; 95%CI: −8.6 to −3.8); VAS (MD −2.7; 95%CI: −3.6 to −1.8); RMQ (MD −3.8; 95%CI: −5.4 to −2.2); ODI (MD −10.6; 95%CI: −14.9 to 6.3)]. Moreover, improvements in pain and disability were clinically relevant.

CONCLUSIONS: An OMT protocol that includes diaphragm techniques produces significant and clinically relevant improvements in pain and disability in patients with NS-CLBP compared to the same OMT protocol using sham diaphragm-techniques.

Disclosures: This work was supported by the University CEU Cardenal Herrera (INDI 16/35), and the Instituto de Salud Carlos III, Spain, (PI12/02710).
REFERENCES:

