



Research Title: The Effectiveness of the Muscle Energy Techniques on the range of motion and on the pain in patients with coxarthrosis

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Research Paper submitted in partial fulfilment of the degree of
BSc (Hons) Osteopathy conversion course

British College of Osteopathic Medicine

2014

Name of the Journal: International Journal of Osteopathic Medicine

(word count:2789)

ABSTRACT

Background: Coxarthrosis is a degenerative bone disease that leads to important modification in the affected joint and that limits the Range of Motion (R.O.M.) of the hip. In a disabling stage it is an important indication for a hip replacement, however there are different types of conservative treatments.

Muscle Energy Techniques (M.E.T.) are a special type of direct techniques that act with articular and muscular effects. The association of M.E.T. results on coxarthrosis has not been studied to date. The aim of this study was to evaluate the effectiveness and the impact of the M.E.T on the ROM and on the pain in patients with coxarthrosis.

Methods: (Experimental, randomized (single blind) controlled trial with a cross over design).

Twenty patients were involved through AIMO University (Italian Academy of Osteopathic Medicine) and other orthopedic clinics. Subjects needed to meet the following inclusion criteria: both males and females aged 45 to 75 years old who had tested positive for the FABER test conducted by an orthopedic.

Internal rotation and External rotation of the hip were simultaneously measured with a long arm goniometer. Level of pain was measured with a Visual Analog Scale (V.A.S.).

Results: Twenty patients were included in the study. Included patients were randomly divided with the use of sealed envelopes in a GROUP A and a GROUP B: each group received treatment and underwent a control period with no treatment as well as a wash-out period. During the osteopathic treatment period Group A experienced a statistically significant improvement of internal rotation ($p < 0.05$) and external rotation ($p < 0.05$), and a significant decrease of pain ($p < 0.05$). GROUP B also showed also a significant decrease of pain ($p < 0.05$) but there were no significant differences for internal and external rotation during the osteopathic treatment period ($p = 0.896$ and $p = 0.790$, respectively).

Conclusion: The results of present study indicates that Muscle Energy Techniques could have positive effects both in terms of mobility and of pain perception in patients with coxarthrosis.

Studies with larger sample sizes and parallel design are warranted to confirm and expand on these results.