

Effect of Osteopathic Manipulative Treatment in Essential Hypertension and Initial Vascular Wall Alteration

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BACKGROUND: Research studies document the association between hypertension, thickening of arterial wall and the occurrence of cardiologic events [1, 2]. So far, the efficacy of osteopathic treatment on the improvement of cardiovascular function has been rarely tested [3]. Aim of the present study is to investigate the association between osteopathic treatment, hypertension and intima media thickness using long-term cardiovascular intermediate outcomes.

METHODS: Non-randomized trial, including treated and control groups of consecutive subjects affected by hypertension and vascular alterations was conducted. Individual characteristics, including systolic and diastolic blood pressure, height, weight, intima media thickness, heart rate at rest and use of prescribed drugs were measured at entry and after 12 months. Osteopathic treatment was administered by a group of osteopaths. Primary endpoints included pre-post differences at 12 months in intima media thickness, and systolic and diastolic pressure between osteopathic and traditional treatment. Statistical analysis was based on univariate t tests and multivariate linear regression.

RESULTS: 31 subjects out of 63 cardiovascular patients were administered osteopathic treatment and followed up for 12 months. Univariate statistical analysis showed no significant imbalances among treated and control groups in terms of main characteristics measured at baseline. At the end of the follow-up, univariate analysis found that osteopathic treatment was significantly associated to change in intima media thickness, and systolic and diastolic blood pressure. Whereas, multivariate linear regression showed that, after adjusting for all potential confounders, osteopathic treatment was significantly associated to change in intima media thickness (mean difference between change in treated and control groups: -0.602; 95% c.i.: -0.745, -0.459) and systolic blood pressure (-4.523; -6.291, -2.755), but not to change in diastolic blood pressure.

CONCLUSION: Our study, targeting patients affected by cardiovascular disorders, shows that after one year, taking into account all relevant clinical parameters, osteopathic treatment is independently associated with an improvement in intima media thickness and systolic blood pressure. The potential benefits of osteopathic manipulation in cardiovascular treatment must be adequately considered, and more formal studies are needed to evaluate its efficacy on a broader population under strict experimental conditions.

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