Impact of Osteopathic Manipulative Treatment on Smooth Pursuit Eye Movements in Healthy Human Adults : A Randomized Clinical Trial.

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Résumé

The idea that osteopathic manipulative treatments (OMTs) have an impact on the human visual system is not new. This hypothesis is based on the restoration of the fascial system elasticity (i.e., the connective tissue enclosing all our organs, including the eyes) by OMTs. However, to date, there is no empirical evidence to support this hypothesis.
We conducted a randomized, double-blind, controlled study to evaluate the effect of an OMT on smooth pursuit in healthy young adults (aged 18 to 35 years). A total of 95 participants were randomly allocated to three groups. Each group performed two tests of 40 smooth pursuit trials. Between these tests, one of the groups was treated with an OMT, the second group received a sham treatment and a control group discussed with the practitioner without being touched.

In all groups, smooth pursuit duration (i.e., time spent to track a moving target without saccades) increased and latency (i.e., time elapsed between target onset displacement and ocular pursuit initiation) decreased between the two tests. Nevertheless there was no greater improvement in smooth pursuit for the OMT group as compared to the other two groups.

These preliminary results confirmed that procedural learning of smooth pursuit occurs within 40 trials, but failed to support the hypothesis of oculomotor enhancement by OMT. Further studies should focus on elderly volunteers or populations with oculomotor disorders.
Note : This study has been pre-registered on Clinicals Trials : https://clinicaltrials.gov/ct2/show/NCT05018390?te

Mots-Clés: Osteopathic Manipulative Treatment (OMT), Smooth Pursuit Eye Movements, Oculomotor System.

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