Biological effects of direct and indirect manipulation of the fascial system. Narrative review.

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Introduction

Osteopathic Manipulative Treatment (OMT) has been challenged over the past decade to provide clinically relevant research relative to mechanisms and efficacy. Despite clinical results in improving function, movement and restoring pain conditions the mechanisms how OMT achieves its effects remain unclear. Osteopathy is a broad manual medicine that involves different body systems and fascial system is a key component of osteopathic manipulative techniques. The objective of this review is to describe, through biomedical literature, the biological effects resulting from direct or indirect manipulation of the fascial system.

Methods

Literature search was performed in February 2016 in the electronic databases: Cochrane, Medline, Scopus, Ostmed, Pedro and authors' publications (full articles only) relative to Fascia Research Congress Website. To be included in this review studies had to meet the following inclusion criteria: investigation into the biological effects resulting from any form of manual fascial treatment techniques, written in the English language only. Studies were excluded if they were not relevant to fascial techniques or if they added other manipulative forms. We excluded articles not related to the biological effect of fascial techniques. Authors followed the selection process independently; validity and quality assessment were not performed in order to not impose any form of restriction to the review. The literature search yielded 95 studies and 24 papers met the inclusion criteria.

Results

Fascial system manipulation has profound and clinically relevant effects on several cellular processes such as shape, proliferation and cytokines secretion (pro-inflammatory or anti-inflammatory). Interesting to note that varying manual technique parameters e.g. magnitude, duration and direction might uniquely affect fibroblasts function and consequently explain the beneficial results of OMT and manual medicine. Clinical interpretation of these results remains difficult to determine because it's based on in-vitro studies that fail to consider other cells or organ system affected by OMT.

Conclusion

Despite growing research in the osteopathic field, biological effects of direct or indirect manipulation of the fascial system are not conclusive. To elevate manual medicine as a primary intervention in clinical settings, it's necessary to clarify how OMT modalities work in order to underpin their clinical efficacies.