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The Efficacy of Osteopathic Manipulative Treatment in Reducing Pain Medication Usage in Chronic Pain Patients: A Brief Literature Review

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Introduction

Pharmacological Approaches to Pain Management

Chronic pain is defined as pain that lasts for greater than 3 months¹, and is one of the most common complaints for adult patients. The CDC estimated that 50 million adults in the United States suffer from chronic pain, including 20 million adults with high-impact chronic pain². Chronic pain almost always includes a pharmacological approach which can involve opioids and non opioids. Non-pharmacological approaches are less commonly used by patients with chronic pain, specifically those dealing with addiction³. Additionally, there is a significant misuse of opioids in the treatment of chronic pain averaging to 21 and 29% in most cases⁴. This highlights the importance of incorporating nonpharmacological therapies in the treatment of chronic pain patients to lessen the misuse of opioids.

Nonpharmacological approaches to Pain Management

Nonpharmacological approaches to chronic pain include behavioral, cognitive, integrative, and physical therapies⁵. One underused form of nonpharmacological therapy for chronic pain is Osteopathic Manipulative Medicine (OMM). OMM is a branch of medicine practiced by osteopathic physicians that incorporates a whole-patient approach to address specific somatic dysfunctions that occur in the human body⁶. Osteopathic physicians integrate Osteopathic Manipulation Treatment (OMT), which involves a range of techniques including Muscle Energy (ME) and High Velocity Low Amplitude (HVLA). There have been several studies demonstrating OMT to be effective in treating chronic back pain in patients⁷. In addition, there are an assortment of studies demonstrating how OMT has been effective in reducing the amount of non-opioid medications patients take. However, there is a lack of information in the field detailing if OMT can decrease the amount of opioids a patient with chronic pain may take.

Methods

The literature was reviewed to find relevant articles that demonstrated the effectiveness of OMT in reducing pain and pain medication. PubMed was the primary database used for locating relevant journals. The keywords included but were not limited to: "OMT in chronic pain", "Effectiveness of OMT in Chronic Pain", "OMT in reducing medication use", "OMT, chronic pain, opioids".

Inclusion Criteria

All studies that researched how OMT could effectively reduce pain as well as reduce medication were included in this review. Types of studies included randomized clinical trials and systematic reviews. There was no year limit to these studies. There were a total of 6 studies that matched the criteria of the review.

Methods (cont.)

Data Extraction

Data from the included literature was analyzed both qualitatively and quantitatively. The results of the different studies were compiled into a table. They were organized based on whether they showed that OMT was able to reduce chronic pain and/or OMT was able to reduce the amount of pain medication used by a patient.

Results

Paper	Type of Research	OMT Demonstrated a Reduction in Chronic Pain	OMT Demonstrated a Reduction in Pain Medication Usage
"Osteopathic manipulative treatment for chronic low back pain: a randomized controlled trial" ⁸	Randomized Controlled Trial	Patients had improvements in back pain. *no significant difference between sham and real OMT	N/A
"Osteopathic manipulative treatment for low back pain: a systematic review and meta-analysis of randomized controlled trials" ⁹	Systematic Review & Meta Analysis	OMT significantly reduced back pain compared to placebo group	N/A
"Osteopathic Manipulation in the Management of Chronic Pain: Current Perspectives" ¹⁰	Systematic Review	OMT significantly reduced lower back pain	OMT has comparable effects to NSAIDs in lowering back pain
"Use of osteopathic manipulative treatment for low back pain patients with and without pain medication history" ¹¹	Review	OMT decreased pain	Suggests that there may not be a need for medication when treated with OMT
"A comparison of osteopathic spinal manipulation with standard care for patients with low back pain" ¹²	Randomized Controlled Trial	Reduction in pain	Patients treated with OMT required less pain medication(NSAIDs & muscle relaxants) and PT then patients treated without OMT
"Osteopathic manual therapy versus conventional conservative therapy in the treatment of temporomandibular disorders: a randomized controlled trial" ¹³	Randomized Controlled Trial	Reduction in pain	OMT patients required significantly less NSAIDs & muscle relaxants

Discussion

All six of the papers analyzed demonstrated that OMT was able to reduce chronic pain. Five out of the six papers demonstrated a clinically significant reduction in pain. Four out of six of the papers demonstrated that OMT was effective in reducing the amount of medication patients needed to take.

Discussion

OMT has been shown to be effective in reducing pain levels for chronic pain patients. This demonstrates a necessity in including OMT as a standard practice when treating chronic pain patients. To fill the gap in the current literature, we will be conducting a chart review to examine the effects of OMT on the amount of opioids used by patients with chronic pain. The patients will be selected from those being seen at the NeuroMusculoskeletal Institute (NMI). We will investigate if there is a measurable decrease in the use of pain medications as they receive continued OMT over several intervals ranging from 6-months, 12 months, 18 months, etc. We will also document the type of OMT they are receiving by a provider. This will allow us to quantify the effectiveness of OMT on reducing opioid usage by chronic pain patients.

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