

OMT in the Emergency Department: A Literature Review

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ABSTRACT

Background: Osteopathic Physicians and their philosophy are based on a patient-centered focus on the comprehensive health of patients, with the use of hands-on methods. The hands-on methods employed fall under the category of Osteopathic Manipulation Treatment (OMT), in which Osteopathic Physicians are extensively trained. **Purpose of study:** The purpose of this study was to look at the literature from the point of view of four questions concerning OMT in the specialty of Emergency Medicine (EM). 1) How often is an osteopathic manipulative treatment (OMT) used in the emergency department (ED)? 2) What are the perceived barriers to the use of OMT in the ED? 3) What are the advantages of the use of OMT treatment in the ED? 4) What are the successful models of OMT use in the ED? **Methods:** PubMed [Pubmed.com] searches were performed to identify research publications. Nine research articles were identified in a search of OMT in EM. **Findings:** 1) How often is an osteopathic manipulative treatment (OMT) used in the emergency department (ED)? 2) What are the perceived barriers to the use of OMT in the ED? 3) What are the advantages of the use of OMT treatment in the ED? 4) What are the successful models of OMT use in the ED? **Conclusions:** OMT is a set of techniques used to address a variety of somatic and visceral pathologies that can be very common and debilitating to the patient population. Medical research in the field of emergency medicine regarding OMT use has been underwhelming, with very few publications since 2008. The use of OMT within emergency medicine has not been widely published, even as the population of osteopathic emergency physicians has increased in the past two decades. OMT research within emergency medicine could be a valuable treatment option for patients.

Keywords: Osteopathic medicine, Osteopathic manipulation treatment in the emergency department, OMT, OMM

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INTRODUCTION

Osteopathic Physicians and their philosophy are based on a patient-centered focus on the comprehensive health of patients, with the use of hands-on methods. The hands-on methods employed fall under the category of Osteopathic Manipulation Treatment (OMT), in which Osteopathic Physicians are extensively trained. OMT employs a multitude of treatment modalities consisting of soft-tissue techniques, muscle energy techniques, counterstrain points, and high-velocity-low-amplitude techniques. Each technique requires between one to four minutes to complete, not including an osteopathic structural assessment. There are a variety of techniques that can be applied to the most common patient presentations seen in the ED; most notably back pain and upper respiratory infections [1].

METHODS

PubMed [Pubmed.com] searches were performed to identify research publications. The initial query yielded nine results. Investigators queried:

1. <Osteopathic Physicians> AND <Emergency Medicine>
2. <Osteopathic Manipulation Techniques> AND <Emergency Medicine>
3. <Osteopathic> AND <Training> AND <Emergency Medicine>

RESULTS

How often is an osteopathic manipulative treatment (OMT) used in the emergency department (ED)?

According to Ray et al, out of 994 osteopathic emergency medicine physicians surveyed, 55% reported OMT use within the emergency department. Additionally, of those surveyed, 28% reported daily or weekly usage of OMT in the ED [2]. The most recent retrospective medical record review was published in 2015 and was conducted at the Good Samaritan Hospital Medical Center in West Islip, NY. The review covered medical records from July 2005 through March 2013 and consisted of 2076 patient records. Of the 2076 medical records, 2868 individual OMT techniques were performed among 70 osteopathic emergency medicine physicians. Some medical records recorded more than one OMT technique performed [3]. Statistical analysis indicates that an average of 1.02 OMT procedures were performed per day. Although the Ray 2004 survey and Ault 2015 retrospective medical record review indicate that OMT was used daily. Ault stated that 70 osteopathic physicians performed OMT in the ED, but the retrospective medical record review did not state how

many total osteopathic physicians were employed at Good Samaritan Hospital during the time covered [3].

What are the perceived barriers to the use of OMT in the ED?

A recent literature review indicated many barriers to the use of OMT in the ED (Roberge, 2009). Patient-care barriers consisted of time constraints, unproven benefits in emergency care, liability concerns, and patient unfamiliarity with OMT [4]. Physician-centered barriers included physician insecurity with their skills in OMT, physician disinterest, and lack of knowledge regarding OMT technique contraindications. Facility-centered barriers included reimbursement issues, hospital privileges issues, and breach of standard care [4].

What are the advantages of the use of OMT treatment in the ED?

The advantages of OMT use in the ED have proposed solutions to the prior described barriers. Three randomized, controlled studies carried out in three separate EDs attested to the efficacy of OMT use for indicated musculoskeletal disorders [5-6]. The techniques used for these studies included soft tissue techniques, myofascial release, muscle energy, high-velocity-low amplitude (HVLA), and counterstrain techniques. These techniques require at most an average of four minutes per technique.

What are the successful models of OMT use in the ED?

Acute Ankle Injuries

OMT was found to be efficacious for the treatment of acute ankle injuries in the ED. The study completed by Eisenhart, et al. reported that a single session of OMT upon presentation to the ED with an acute ankle injury improved outpatient care outcome. Patients reported significantly decreased pain and increased range of motion both immediately after the administration of OMT and one week later. This study provided a potential use for OMT for the presentation of acute ankle injuries in the ED [5].

Acute Neck Pain

In a study done by McReynolds, et al., OMT was found to be equally as effective as IM Ketorolac in the treatment of acute neck injuries. At one-hour post-treatment, OMT provided just as much pain relief but was more effective at reducing pain intensity. This study provided evidence for use of side-effect-free OMT as an alternative to analgesics for acute neck pain [6].

DISCUSSION

The use of OMT in the ED has been discussed as early as 1996 within the literature, which outlined five common presentations and suggestions on which techniques to employ to treat these chief complaints. Since the last literature review [4], there has been one published retrospective medical records review [3] that observed that many osteopathic physicians used OMT on a semi-regular basis. The lack of current publications may indicate uncertainty on how to advance clinical research on the topic or perhaps a level of disinterest amongst Osteopathic physicians.

The observation that little investigation and research into OMT use in the ED could be a catalyst to help advance this research field.

CONCLUSION

OMT is a set of techniques used to address a variety of somatic and visceral pathologies that can be very common and debilitating to the patient population. Medical research in the field of emergency medicine regarding OMT use has been underwhelming, with very few publications since 2008. The use of OMT within emergency medicine has not been widely published, even as the population of osteopathic emergency physicians has increased in the past two decades. OMT research within emergency medicine could be a valuable treatment option for patients.

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