Patient Perception of Osteopathic Manipulative Treatment in a Hospitalized Setting: A Survey-Based Study

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Context: Although many studies on the effects of osteopathic manipulative treatment (OMT) have been published, few examine its role in treating hospitalized patients.

Objective: To determine patient perception of receiving OMT while hospitalized.

Methods: Patients were referred to receive OMT through a consultation service and were separated into four groups: medical, musculoskeletal, obstetric, or postsurgical. The same osteopathic physician treated each patient and used various OMT techniques as needed. High-velocity, low-amplitude was not used. Patient perceptions were assessed 24 hours after treatment using a 10-question survey. Main outcome measures included pain, need for pain medication, anxiety about hospitalization, and overall comfort level.

Results: Of the 195 hospitalized patients who received OMT, 160 (82%) returned the survey. Of these patients, 43% reported a decreased need for pain medication, 74% indicated a decrease in pain, 90% had reduced anxiety, and 98% reported that OMT improved their overall comfort level. In addition, 94% of patients felt OMT was helpful for their recovery, and 98% would recommend OMT for other hospitalized patients.

Conclusion: Osteopathic manipulative treatment may be of tremendous benefit to hospitalized patients, regardless of their diagnoses.

STUDENT CONTRIBUTION

All patients were required to agree to receive OMT and to be able to complete a survey on their own.

Osteopathic Manipulative Treatment
Each patient received OMT individualized to his or her specific somatic dysfunction, medical condition, and chief complaint. The diagnosis and treatment were provided by the same osteopathic physician (B.B.) for each patient. Specific OMT techniques for each patient were performed according to the discretion of this physician (B.B.). A variety of OMT techniques were used, including balanced ligamentous strain, counterstrain, soft tissue, muscle energy, facilitated positional release, and cranial. High-velocity, low-amplitude was not used on any patient based on the personal preference of the osteopathic physician.

Each patient received one OMT session, which typically lasted 15 to 20 minutes. Maneuvers were applied to the patients in their hospital beds. Patients were not told at the time of receiving OMT that they would receive a survey.

Survey
A nonvalidated survey comprising 10 questions (Figure) was used to evaluate patient perceptions of OMT. The questions were selected based on the concerns that the OMT administrator (B.B.) consistently heard from patients.

Approximately 1 day posttreatment, the osteopathic physician (B.B.) followed up with each patient and asked him or her to complete the survey, which asked if the patient felt that OMT improved various aspects of his or her health. Patients were allowed to respond “yes,” “no,” or “does not apply” to all of the questions on the survey except number six. For this question, respondents could choose “0,” “1-3,” “4-6,” “6-10,” “greater than 10,” or “does not apply.” In addition, for question two (ie, “Do you feel OMT helped your pain?”), patients were also asked to rate their pain before and after OMT on scales of zero (no pain) to 10 (worst pain). A section for comments was provided at the end of the questionnaire.

Surveys were collected by either the treating osteopathic physician (B.B.) on follow-up or a nurse on patient discharge. Completed surveys were grouped into the previously described categories (ie, medical, musculoskeletal, obstetric, or postsurgical). A perceived benefit was defined as either an answer of “yes” to the question or a decrease of two points in the level of recorded pain (question two). Questions five and six were to be used to separately assess the effect of OMT on the respiratory effort of postsurgical patients.

Results
A total of 195 hospitalized patients were referred and agreed to receive OMT. Of those patients, 160 returned the survey, for a response rate of 82%. Of these patients, 34 were grouped as medical patients; 4, musculoskeletal; 28, obstetric; and 94, surgical.

1. Did you feel OMT was helpful in your hospital recovery?
2. Do you feel OMT helped your pain?
3. Do you feel OMT decreased your need or frequency for pain medicines?
4. Do you feel manipulative medicine helped your breathing effort?
5. Did you use your incentive spirometer the first 24 hours after surgery?
6. If you did use your incentive spirometer, how often in the first 24 hours following surgery?
7. Do you feel OMT helped your bowel function?
8. Do you feel OMT helped reduce the stress/anxiety of the hospital environment?
9. Do you feel OMT helped your overall comfort level while in the hospital?
10. Would you recommend OMT as part of other patients’ recovery and treatment plans?

The most common admitting diagnosis was preterm labor for obstetrics. In the surgical category, common admitting diagnoses were appendicitis, diverticulitis, hernia repair, and general orthopedic and gynecologic operations. In the medical category, the most common admitting diagnosis was cancer, followed by respiratory and cardiovascular disease. The small number of patients in the musculoskeletal group precludes identification of a common admitting diagnosis.

The Table highlights patients’ perceived benefits of OMT according to their survey responses. Overall, 74% of patients had decreased pain after OMT, and 43% noted a decrease in the need for pain medications. In addition, at least 90% of all respondents believed OMT was beneficial in improving overall comfort, easing recovery, and reducing stress and anxiety. Because survey questions regarding breathing effort, incentive spirometer use, and bowel function were not completed on many surveys, these results were not evaluated. Overall, 98% of patients indicated that they would recommend OMT in the treatment of other patients.

Comment
The precise benefits of OMT have been debated since the creation of osteopathic medicine more than a century ago. Despite the numerous studies on OMT’s effect in treating patients...
with myriad illnesses,²⁻⁵,⁹ such research with a substantial power analysis is lacking. The present study was conducted in an effort to clarify OMT’s benefits from a patient standpoint. As one study⁸ suggested, patients view OMT as having substantial benefits in improving overall health.

Many studies evaluate specific OMT techniques and determine their benefits according to measurable outcomes. In the present study, OMT varied according to the physician’s findings for each patient. Thus, the survey did not assess the efficacy of specific OMT techniques but rather recorded the patients’ perception of the benefit of receiving OMT.

Osteopathic physicians, according to current standards of care in a clinical setting, assess patients and choose techniques based on the patient’s age, comorbidities, and chief complaint as well as the physician’s findings of somatic dysfunction. As osteopathic physicians tend to use OMT techniques with which they are most comfortable and have the greatest experience, the techniques chosen by the treating osteopathic physician (B.B.) in the present study may differ substantially compared with those of another physician treating the same patients. Future studies should include control subjects and use specific OMT techniques to standardize outcomes, which may indicate whether a specific technique is more effective than another.

However, the present survey-based study sought to identify what OMT’s benefits were according to patient perception. The results indicate that hospitalized patients perceived OMT as beneficial in various aspects of hospital care (ie, level of comfort, recovery, and stress and anxiety). Interestingly, only 1 of the 4 patients admitted for musculoskeletal conditions reported improvement in pain, whereas a majority of medical, obstetric, and surgical patients reported a decrease in pain after OMT. These findings suggest the need for further investigation of OMT’s role in pain management in hospitalized patients.

The most notable result of the survey is the perceived reduction of stress and anxiety in patients who received OMT. The presence of somatic dysfunction is an indication that a cellular or tissue change has been elicited by a neurophysiologic mechanism resulting from an internal or environmental factor.¹⁰ Furthermore, stress has been identified as an exacerbating factor in the development of somatic dysfunction.¹⁰,¹¹ The reduction in stress indicated by the respondents may have contributed to the reported reduction in pain in some cases, subsequently leading to decreased use of pain medications.⁶,¹²

Limitations

There are several limitations to the present study, including study bias. For example, patients may have been chosen for referral by their attending physician because they were thought to be more likely to participate or respond positively to OMT or the survey. Those open to receiving OMT are more likely to perceive the outcome of therapy as being beneficial.¹³

In addition, the results of the survey may have been confounded by self-selection bias. Although each patient was referred for OMT by a nontreating physician, only patients who voluntarily chose to have OMT were included in the study. Previous positive experience with OMT, a preconceived idea of the benefit of OMT, or a positive bias for “alternative” therapies may have influenced the participation and responses of the patients. Also, it is possible that a desire or need for increased attention or interaction from hospital staff could have contributed to biases.

All patients were asked to fill out a survey 1 day after treatment. Because some patients were discharged before surveys were completed and returned, several additional biases may have been introduced. For example, patients who completed the survey may have been hospitalized longer and may have had an increased risk for loneliness or depression and a greater need for increased contact with providers.

Likewise, patients who completed the survey may have been sicker than those who did not complete the survey, and patients who completed the survey may have received OMT earlier in their hospitalization stay than those who did not complete the survey. As such, the outcomes in this study may have been biased because that patients having better overall outcomes were more likely to be discharged before completion of the survey.

Another limitation to the present study’s results is the lack of a control or sham therapy.
group. Because of this limitation, we cannot assess the impact of the placebo effect, which is known to be a component of the response to OMT.14

Although the significance and validity of the findings in the present study are limited, the results of the survey encourage further investigation. In subsequent studies, a control (sham therapy) group should be used to account for placebo effect. In addition, the survey administrator and patients should be blinded to the intent of the research project to limit the influence of patients’ existing opinions regarding OMT—perhaps by telling patients that they will be surveyed for their response to a new treatment. Surveys should be administered before and after treatment to further measure and qualify results.

To limit self-selection biases, researchers should consider providing incentives to patients. To further investigate OMT’s role in improving patient outcomes, patients should be enrolled by a third party without disclosing their diagnoses to the treating osteopathic physician. In doing so, the treating physician would not be able to assume a typical pattern of dysfunction for a particular condition and therefore would be more likely to fully evaluate the patient. Presentation of patients in the hospital bed or treating facility should be standardized, also decreasing the ability of the treating physician to distinguish diagnoses. However, certain OMT techniques should be avoided for some patients (eg, cranial treatment for patients with intracranial hemorrhages).

Conclusion
Among hospitalized individuals receiving OMT in this study, a vast majority reported beneficial effects, including reduced anxiety and pain. Additional studies with improved methodology may better identify the benefits of OMT for hospitalized patients and help clarify its role in the hospital setting.

References