

OCCUPATIONAL HEALTH

SPECIAL INTEREST GROUP

President's Message

Lorena Pettet Payne, PT, MPA, OCS

Spread the Word! Combined Sections Meeting (CSM) is coming up. Consider getting some advanced networking and instruction from experts in occupational health by attending the preconference course, “**Diversifying and Increasing your Revenue Stream: How to Start or Expand the Occupational Health/Wellness Component of Your Practice.**” This preconference course will be sponsored by the Orthopaedic Section, APTA, and the Occupational Health Special Interest Group (OHSIG) at the CSM in Anaheim, California, Tuesday, February 16, 2016, 8:00 a.m. – 5:00 p.m. Location is to be determined.

For anyone that may assist in teaching work rehabilitation and injury prevention, check out the 4th edition of Catherine Goodman's text, *Pathology - Implications for the Physical Therapist*. The OHSIG is given recognition as a resource for Physical Therapists working with work-related injuries and prevention. Part of the SIG's objectives include sharing entry-level knowledge with educators and providing advanced training for all interested colleagues.

A group of engaged therapists met in Worcester, Massachusetts, August 15-17, to pour over literature, identifying the efficacy of the Physical Therapist practicing in work-related injury prevention and management. Under the direction of Reuben Escorpizo, the group hopes to complete the Work Rehabilitation Guideline over the next year.

Join your colleagues to discuss the current activities of your special interest group in Anaheim for the preconference course (Tuesday, February 16), OHSIG Board Meeting (Wednesday, February 17 at 6 p.m.), and the OHSIG membership meeting and educational session on Thursday, February 18, 2016, from 7 a.m.-10 a.m.



Members of the Work Rehab CPG group met for a productive meeting in Worcester, MA, in August.

Does the Evidence for Thoracic Spine Manipulation Translate Into Better Outcomes In Routine Clinical Care For Patients With Occupational Neck Pain?

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Neck pain has an annual estimated incidence of about 15%.¹ Annual worker's compensation costs in the United States for neck pain are second only to low back pain.² Previous research has shown that patients with mechanical neck pain who received thoracic spine manipulation and exercise exhibited significantly greater improvements in disability compared with patients who received exercise only.³ The application of this evidence and its effects on clinical outcomes among patients with occupational neck pain has not been examined. The purpose of this study was to examine outcomes of patients treated in physical therapy with occupational neck pain who received thoracic spine thrust manipulation compared to those who received no thoracic spine thrust manipulation.

MATERIALS AND METHODS

Subjects

A retrospective review of patients with occupational neck pain receiving treatment at 8 outpatient physical therapy clinics of Intermountain Healthcare in the Salt Lake City region from January 1, 2007, to December 31, 2011, was done using the Intermountain Rehabilitation Agency Rehab Outcome Management Systems (ROMS). The ROMS is an electronic database that stores baseline and follow-up data collected from the Intermountain outpatient physical therapy clinics. All patients receiving at least two visits of outpatient physical therapy are entered into ROMS. Demographic data are input and the ROMS database is linked to the billing database, which allows the identification of patients with neck pain receiving worker's compensation, and computation of physical therapy costs for each patient. The protocol for this study was approved by the Intermountain Institutional Review Board. All patients completed the Neck Disability Index (NDI) at the beginning of each visit. The NDI is a widely used disability scale administered to patients with neck pain and consists of 10 items addressing different aspects of function each scored from 0 to 5 with a maximum score of 50 points. The score is then doubled and interpreted as a percentage of the patient's perceived disability. The higher the score, the higher the perceived disability. The NDI has been found to be a reliable and valid outcome measure for patients with neck pain.⁴ Patients with neck pain of less than 4 weeks duration between 18 and 60 years of age

with or without unilateral upper extremity symptoms, and a NDI score of at least 20% receiving worker's compensation and referred to physical therapy were included. Exclusion criteria were bilateral upper extremity symptoms, two or more positive neurologic signs consistent with nerve root compression and previous surgery of the cervical spine.

Methods

There were 128 patients classified as having acute occupational neck pain during the time period that were reviewed for the inclusion and exclusion criteria. Symptom duration, age, postoperative status, and baseline NDI were all determined from the ROMS database. The charts of those not excluded on one of these factors were reviewed to see if there were any other exclusion criteria present.

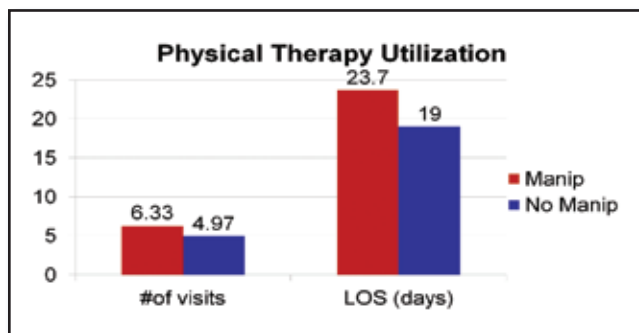
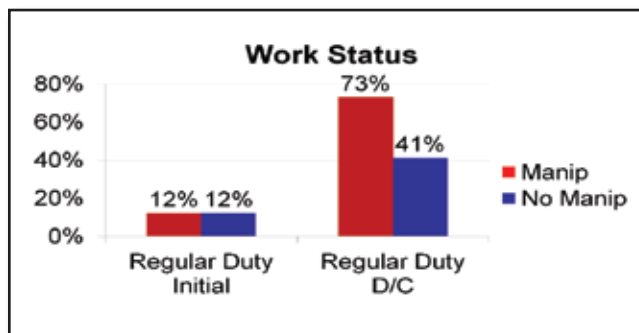
Physical therapy documentation of all of the patients in the study were examined to see if a thoracic spine manipulation technique was administered during at least one of the treatment sessions. If the treatment record showed that a high-velocity thrust procedure was done to the thoracic spine, the patients were categorized as having received manipulation. If the treatment record indicated that a mobilization was used other than a high-thrust procedure, then the patient was categorized as no manipulation. All patients in both groups received some form of exercise as part of treatment. Pain intensity and disability were recorded at each physical therapy visit. The number of visits, work status, length of stay, and costs of physical therapy were recorded. Comparisons were made between patients receiving thrust manipulation versus no manipulation.

RESULTS

One hundred and seven patients from the original 124 met the inclusion criteria [mean age 38.3 (± 10.5), 54.2% male]. The two most common reasons for exclusion were a history of neck surgery and two or more neurological signs. Thrust manipulation to the thoracic spine was received by 73 (68.2%) patients and 34 (31.8%) patients received no manipulation. At baseline, no significant differences were found between the groups. Patients receiving thrust manipulation had on average 1.3 more visits (p = .03), 4.7 days longer length of stay (p = .25), and \$272.90 more in total cost (p = .023), but experienced significantly greater reductions in disability (p < .001) and pain (p = .001) with treatment than patients not receiving manipulation.

There was also a greater percentage of patients in the manipulation group (73%) that returned to work regular duty than in the group receiving no manipulation (41%).

Data analysis was done using SPSS version 15.



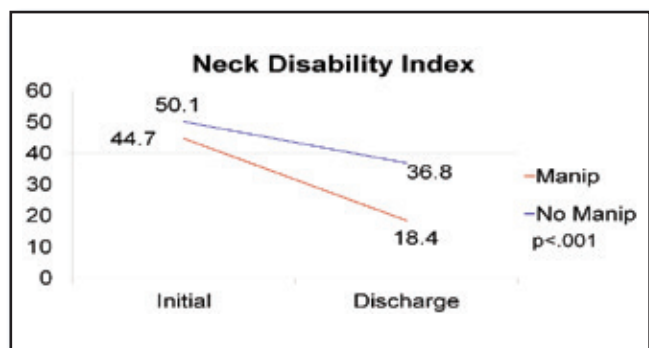
DISCUSSION

We performed this retrospective review of patients with occupational neck pain to examine the applicability of evidence supporting thrust manipulation for patients with acute neck pain. We also wanted to look at the clinical outcomes related to receiving manipulation versus no manipulation to determine if the evidence from randomized control trials carried over into routine clinical care of patients with occupational neck pain.

In our group of clinics, it appeared that manipulation was used in more than half of the patients which is different than what is reported in other research where many evidence-based interventions tend to be underutilized by physical therapists.⁵ We did not attempt to differentiate the type of thrust technique used by the treating therapists, as this was largely determined by the individual patient's impairments and the level of comfort of the treating physical therapist that is more consistent with routine clinical care. We therefore cannot compare outcomes from receiving different types of thrust manipulations.

The research showing patients with acute, mechanical neck pain demonstrate significantly greater improvements in disability and pain when they receive a thoracic spine manipulation and exercise was supported by the results of this retrospective review among patients with occupational neck pain.³

The manipulation group did have more physical therapy uti-



lization than the no manipulation group. This may have been due to more patients in the manipulation group completing the episode of care versus those in the no manipulation group who were observed to be referred on to specialists at a higher rate due to lack of progress.

We cannot exclude the influence of other factors in creating the observed differences between the groups because the design of this study was retrospective. Several factors that may have influenced outcomes could not be recorded including the patient's employer, psychological status, coping skills, and co-interventions. Also, because of the lack of a true control group, it precludes conclusions about the efficacy of manipulation among patients with occupational neck pain. However, our results suggest that further investigation among this group of patients is warranted.

CONCLUSION

The evidence supporting superior outcomes for neck pain and disability with the use of thoracic spine thrust manipulation and exercise was supported within the study limitations of our retrospective review of patients with occupational neck pain. The manipulation group did incur more costs in physical therapy, but those costs would be offset by the savings of the larger percentage of patients that were able to return to work regular duty.

REFERENCES

1. Cote P, Cassidy JD, Carroll LJ, Kristman V. The annual course of neck pain in the general population: a population-based cohort study. *Pain*. 2004;112:267-273.
2. Wright A, Mayer TG, Gatchel RJ. Outcomes of disabling cervical spine disorders in compensation injuries. A prospective comparison to tertiary rehabilitation response for chronic lumbar spinal disorders. *Spine*. 1999;24:178-183.
3. Cleland JA, Mintken PE, Carpenter K, et al. Examination of a clinical prediction rule to identify patients with neck pain likely to benefit from thoracic spine thrust manipulation and a general cervical range of motion exercise: multicenter randomized clinical trial. *Phys Ther*. 2010;90:1239-1250.
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PERFORMING ARTS

SPECIAL INTEREST GROUP

President's Letter

Annette Karim, PT, DPT, OCS, FAAOMPT

Fall is upon us! It is time to submit your posters and platforms for CSM 2016. The Performing Arts SIG awards an annual student scholarship for this event. When you submit your performing arts-related poster or platform, please contact our student scholarship chair.

At CSM 2016, the PASIG will offer a preconference course, "Dynamic Neuromuscular Stabilization: Assessment & Management of Performing Artists," presented by Clare Frank, PT, DPT, OCS, FAAOMPT, and me, on Wednesday, February 17, 2016, 8:00 a.m. to 5:00 p.m.

We will have our annual CSM Business Meeting on Friday, February 19, from 7:00 a.m. to 8:00 a.m. All are welcome to join in! Our regular PASIG programming will be on the same day from 3:00 p.m. to 5:00 p.m. Jennifer Green, PT, MS, CMT, will present, "Life on Broadway: Care of the Professional Theatrical Performer." We look forward to seeing you at all of our events.

The Fellowship Task Force has a performing arts physical therapy practice analysis survey that will be distributed this fall. Thank you in advance for participating in this survey. We recognize that your time is valuable. Participation from a broad sampling of clinicians is critical to the process and very much appreciated.

Several positions on our Board will be vacant for new chairs in 2016. Please consider serving, and contact one of our Nominating Committee members. We have a lot of fun, and a little effort goes a long way, as we move forward in the areas of education, research, screening, membership, public relations, and scholarship.

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