

## Manual Therapy Holds Promise for Treatment of Neck Pain

Hoving JL, Koes BW, de Vet HC, et al. Manual therapy, physical therapy, or continued care by a general practitioner for patients with neck pain. A randomized, controlled trial. *Ann Intern Med* 2002;136:713–22.

### Study Overview

**Objective.** To compare the effectiveness of manual therapy and physical therapy with usual care by a general practitioner in the management of neck pain.

**Design.** Randomized single-blinded controlled trial.

**Setting and participants.** Patients aged 18 to 70 years who had nonspecific neck pain for at least 2 weeks were recruited from 42 general practitioner practices in the Netherlands. Patients demonstrating any signs or symptoms suggestive of a non-benign cause of neck pain were excluded from the study.

**Intervention.** Patients were randomized to 1 of 3 intervention arms: 6 weeks of manual therapy sessions involving specific mobilization techniques once a week; 6 weeks of physical therapy sessions involving exercise therapy twice a week; or 6 weeks of usual care by the patient's general practitioner involving analgesics, counseling, and education.

**Main outcome measures.** Each patient reported pain, recovery, and functional disability at baseline, 3 weeks, and 7 weeks after initiation of therapy. Range of cervical motion and physical dysfunction also were assessed by trained physical therapists blinded to the intervention assignment of each patient. Treatment was considered successful if the patient reported being "completely recovered" or "much improved" on a 6-point scale.

**Main results.** The 183 patients randomized to the 3 groups had similar demographics and baseline outcome measures. In the intention-to-treat analysis, the treatment success rates at 7 weeks were 68.3% for the manual therapy group, 50.8% for the physical therapy group, and 35.9% for the continued care group. Treatment success rates for the manual therapy group were statistically higher than those for the physical therapy group or the continued care group, whereas the treatment success rates for the physical therapy and the continued care groups were not statistically different. Patients in the manual therapy group also had significantly lower pain intensity than patients in the other 2 groups. Disability scores

and most outcome measures also favored the manual therapy group, although statistical significance was not reached. Patients in the manual therapy group, however, were more likely to report a temporary increase in neck pain that lasted more than 2 days after receiving therapy.

**Conclusion.** Manual therapy compared favorably as a treatment option for patients with neck pain compared with physical therapy or continued care by a general practitioner.

### Commentary

Neck pain is a common problem that affects more than 50% of the population [1]. While manual therapy has been used for the management of this common problem since the time of Hippocrates [2], conclusive evidence for its efficacy is lacking. This trial, which examined the role of manual therapy and physical therapy in the management of neck pain, has helped to clarify its role. Hoving et al were able to show that patients with neck pain for more than 2 weeks benefited from manual therapy, which consisted of an "eclectic" combination of coordination, stabilization, and joint mobilization techniques. The results were impressive: almost twice as many patients randomized to the manual therapy group reported either significant improvement or resolution of their neck pain compared with the usual care group. Other clinical outcomes, including improved range of motion, also favored the manual therapy group.

While these results suggest that manual therapy has a potential role to play in the management of neck pain, they should be evaluated in light of a few limitations of the study. There was a suggestion that patients randomized to the manual therapy group had fewer concomitant symptoms, and this imperfection in the randomization process could have favored the manual therapy group. Patients and therapists could not be blinded to the group assignment; therefore, the primary outcome of perceived recovery might have been subject to bias. The study size was small and, as a result, many important outcomes, such as quality of life and absence from work, could not be adequately assessed.

Even if we believe in the efficacy of manual therapy, we must take great care to confirm its safety before its use can be

widely recommended for a non-life-threatening and self-limiting condition. This issue has been highlighted by reports of vertebral artery dissection and strokes in patients who have undergone cervical spinal manipulation by chiropractors [3]. Given that many patients in the study reported increased pain following manual therapy, the risk of injury resulting from manual therapy must be weighed against its benefits. It also is unclear whether physical therapists and chiropractors in North America currently possess the skills and experience to safely apply the techniques employed by the manual therapists in the Netherlands. Before manual therapy can become a standard treatment modality in North America, issues of provider training and certification must be addressed.

### **Applications for Clinical Practice**

Manual therapy may be helpful in the management of pa-

tients with neck pain when no clear-cut underlying pathology can be identified. However, given the limitations of this study and the challenges in administering this therapy in a standardized manner, further studies are needed in North America to confirm the efficacy, safety, and feasibility of this treatment modality.

*—Review by Eric G. Poon, MD*

### **References**

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2. Posner J, Glew C. Neck pain [editorial]. Ann Intern Med 2002;136:758-9.
3. Ernst E. Spinal manipulation: its safety is uncertain. CMAJ 2002;166:40-1.

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