Spine. 2008 Oct 15;33(22):2371-8.

The effectiveness of manual physical therapy and exercise for mechanical neck pain: a randomized clinical trial.

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STUDY DESIGN: Randomized clinical trial. OBJECTIVE: To assess the effectiveness of manual physical therapy and exercise (MTE) for mechanical neck pain with or without unilateral upper extremity (UE) symptoms, as compared to a minimal intervention (MIN) approach. SUMMARY OF BACKGROUND DATA: Mounting evidence supports the use of manual therapy and exercise for mechanical neck pain, but no studies have directly assessed its effectiveness for UE symptoms. METHODS: A total of 94 patients referred to 3 physical therapy clinics with a primary complaint of mechanical neck pain, with or without unilateral UE symptoms, were randomized to receive MTE or a MIN approach of advice, motion exercise, and subtherapeutic ultrasound. Primary outcomes were the neck disability index, cervical and UE pain visual analog scales (VAS), and patient-perceived global rating of change assessed at 3-, 6-, and 52-weeks. Secondary measures included treatment success rates and post-treatment healthcare utilization. RESULTS: The MTE group demonstrated significantly larger reductions in short- and long-term neck disability index scores (mean 1-year difference -5.1, 95% confidence intervals (CI) -8.1 to -2.1; P = 0.001) and short-term cervical VAS scores (mean 6-week difference -14.2, 95% CI -22.7 to -5.6; P = 0.001) as compared to the MIN group. The MTE group also demonstrated significant within group reductions in short- and long-term UE VAS scores at all time periods (mean 1-year difference -16.3, 95% CI -23.1 to -9.5; P = 0.000). At 1-year, patient perceived treatment success was reported by 62% (29 of 47) of the MTE group and 32% (15 of 47) of the MIN group (P = 0.004). CONCLUSION: An impairment-based MTE program resulted in clinically and statistically significant short- and long-term improvements in pain, disability, and patient-perceived recovery in patients with mechanical neck pain when compared to a program comprising advice, a mobility exercise, and subtherapeutic ultrasound.