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# Prospective, Randomized, Double-Blind, Placebo-Controlled Clinical Trial Assessing the Effects of Applying a Force to C5 by a Mechanically Assisted Instrument on Referred Pain to the Shoulder.

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**Abstract:**

**Study Design:** Randomized, prospective, double-blind, placebo-controlled clinical trial. **Objective:** To determine the effects of applying a force to C5 of the spine by a mechanically assisted instrument (MAI) in patients with referred shoulder pain. **Summary Of Background Data:** Manipulating C5 of the spine is a chiropractic treatment for referred shoulder pain; there are no clinical trials evaluating its efficacy. Outcome measures were patient ranked questionnaires and independent examiner findings. One hundred and twenty-five patients were diagnosed with referred shoulder pain of cervical origin; 65 patients were in the treatment cohort and 60 patients in the placebo cohort. **Methods:** This was a prospective, randomized, double-blind, placebo-controlled trial assessing the effects of applying a force to C5 by a MAI to patients with referred shoulder pain. The treatment cohort had the MAI set at the maximum setting to transmit a force into the spine; the placebo cohort had the MAI turned off. Primary outcome measures were frequency and severity of extreme shoulder pain obtained via a patient-reported questionnaire; secondary outcome measures were patient ranked pain and functional outcomes as well as examiner assessed range of motion and strength. Assessment procedures were completed at 24 weeks posttreatment and data were analyzed with intent-to-treat protocol. **Results:** There was a reduction in the frequency but not severity of extreme shoulder pain in the treatment cohort, average ranking reducing from weekly to monthly ( $P < 0.05$ ). Patients treated with the MAI had 10 N ( $P = 0.04$ ) better internal rotation strength after 6 months posttreatment. No differences with any other outcome measures between the two cohorts at the 24-week study period. **Conclusion:** The major effect of applying a MAI to the level of C5 of the spine in referred shoulder pain is improved shoulder strength for internal rotation in this randomized double-blinded clinical trial. **Level Of Evidence:** 2. [ABSTRACT FROM AUTHOR]

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