

ABSTRACT

The Effectiveness of Orthopedic Manual Therapy, including Scientific Therapeutic Exercise Progressions, in the Treatment of Cervicobrachial Double Crush Syndrome and Thoracic Outlet Syndrome

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Purpose

The purpose of this retrospective study was to describe and test the effectiveness of an Orthopedic Manual Therapy program that included Scientific Therapeutic Exercise Progressions in the treatment of patients with Cervicobrachial Double Crush Syndrome and Thoracic Outlet Syndrome.

Methodology

The research design utilized in this study was a single group retrospective design with repeated measures. Repeated measures included changes in pain and paresthesia; nerve tension; neck mobility; Tinel testing; exercise testing that included changes in tolerance to tissue tension of the neck, shoulder girdle, and upper extremity, plus endurance-strength of the neck, shoulder girdle, and upper extremity musculature; changes in neurological compromise in the thoracic inlet; changes in cervical spine posterior element compression induced pain; and changes in median nerve compromise in the carpal tunnel.

Subjects selected for this study were all patients treated in the researcher's institute from 1997 through 2000 who were classified as having either Cervicobrachial Double Crush Syndrome or Thoracic Outlet Syndrome and who were otherwise qualified based on selected inclusion/exclusion criteria.

In order to determine whether or not observed changes in the repeated measures were statistically significant, the Wilcoxon Signed-Ranks Test and Chi Square Goodness of Fit against a Known Distribution was used.

Findings

Changes in all measures except the following were found to be statistically significant: Tinel testing of the wrist and elbow; neurological compromise in the thoracic inlet; cervical spine posterior element compression reduced pain; and median nerve compromise in the carpal tunnel on the right side.

Conclusions

Although the literature on double crush syndrome and thoracic outlet syndrome was not in agreement, the findings of the current study do agree in large measure with the findings of researchers who promoted conservative treatment of these two diagnoses.

Recommendations for further research include utilizing a prospective research design that that also features blinding of the researcher.