

# INSIGHTS INTO CHIROPRACTIC

*Discerning the true nature of an alternative health care method*

## Whiplash Associated Disorders & Chiropractic

### INTRODUCTION

Whiplash is the common term used to describe injury of the soft-tissues of the neck arising from an automobile accident. Much controversy exists regarding this common cause of neck pain, headache, and disability. The accumulated literature suggests that greater than 40% of patients suffering a "whiplash" injury will suffer some long-term symptoms, and that if they are still symptomatic after three months there is about a 90% chance that they will remain so. Doctors of chiropractic routinely treat patients suffering this type of injury with remarkable results—even for those with chronic pain

### THE QUEBEC TASK FORCE

The issue of "whiplash" is so controversial that an international task force of twenty-five experts was commissioned to review the available literature on the subject and report their findings to the medical community. The findings of the Quebec Task Force on Whiplash Associated Disorders(1) was published in the medical journal Spine in April of 1995.

The Task Force recommended that patients be placed into one of five categories based upon their history, physical examination findings, and radiographic findings. The clinical presentation of these categories follows. Grade 0 Whiplash Associated Disorder (WAD) presents with a history of involvement in an automobile accident but no physical complaints

about the neck and no physical signs. Grade I WAD presents with symptomatic complaints of neck pain, stiffness, and tenderness but no objective physical signs upon examination. Grade II WAD includes neck complaint and musculoskeletal signs of decreased cervical range of motion and point tenderness upon palpatory examination. Grade III WAD includes all the above plus neurologic involvement of one or more of decreased or absent deep tendon reflexes, motor weakness, and/or sensory deficits. Finally, Grade IV WAD includes the above plus fracture or dislocation.

In general, Grades I, II, and III WAD may be treated conservatively. Recommendations include (A) reassurance that the condition is benign and generally self-limiting, (B) non-narcotic analgesia and nonsteroidal anti-inflammatory agents (for not more than about three weeks), (C) range of motion exercises, (E) manipulation or mobilization by trained persons, and (F) return to normal activities as soon as possible. Uncomplicated cases should resolve with such treatment within three to six weeks with a maximum of about twelve weeks prior to multidisciplinary team reassessment.

The Task Force recommendations further state that soft collars should NOT be used in Grade I-III WAD because studies indicate that they may prolong disability by promoting inactivity and lack of movement. Prolonged

rest is seldom indicated, and muscle relaxants are contraindicated since they tend to sedate muscles and do not promote mobility and movement.

These recommendations were made following an extensive review of the scientific literature. Many common treatments were found to have little or no scientific validation regarding their use.

#### MANIPULATION AND THE SCIENTIFIC LITERATURE

Although many common treatments used in the health care sciences do not have even one prospective randomized clinical trial to scientifically support their use(2), at least four prospective randomized clinical trials exist which seem to indicate that spinal manipulation is an effective treatment for neck pain.

In 1982 Sloop et al.(3) published the findings of their randomized controlled trial of twenty-one patients receiving a single neck manipulation as treatment for the diagnoses of cervical spondylosis or non-specific neck pain. The patients receiving manipulation were compared to a control group of eighteen patients with the same diagnoses. The authors state, "The simplest test of outcome was to ask the patient, 'did the treatment help you?' At three weeks, 12 of 21 (57%) patients receiving manipulation responded affirmatively, compared with five of 18 (28%) controls."

In 1983, a randomized controlled trial of cervical spine manipulation for fifty-two patients was published in the Journal of the Royal College of General Practitioners. Subjects were assessed over a three week period to determine the effect of cervical spine manipulation on self-reported pain and range of motion. The authors found that, "Manipulation produced a significant immediate improvement in symptoms in those with pain or stiffness in the neck, and pain/paraesthesia in the shoulder, and a nearly significant improvement in those with pain/paraesthesia

in the arm/hand. Manipulation also produced a significant increase in measured rotation that was maintained for three weeks and an immediate improvement in lateral flexion that was not maintained(4)."

Koes et al.(5) performed a randomized clinical trial of 256 patients with nonspecific back and neck complaints lasting for at least six weeks duration. Patients were randomly assigned to either manual therapy, physiotherapy, or continued treatment with their general practitioner. Outcome measures consisted of severity of the chief complaint, global perceived effect, and functional status. Based on their results, Koes et al. state, "Both physiotherapy and manual therapy decreased the severity of complaints more and had a higher global perceived effect compared to continued treatment by the general practitioner(5)."

Finally, Cassidy et al.(6) performed a prospective randomized trial on one hundred consecutive patients with unilateral neck pain. Fifty-two received one high-velocity, low-amplitude rotational manipulation while the remaining forty-eight received a passive muscle energy technique applied to the neck. Both treatments increased range of motion, however, the manipulation had a significantly greater effect on reducing pain intensity. "Eighty-five percent of the manipulated patients reported pain improvement immediately after treatment. However, the decrease in pain intensity was more than 1.5 times greater in the manipulated group(6)."

More recently, Woodward et al.(7) have undertaken a pilot study of chiropractic treatment of patients suffering with chronic whiplash symptoms. Twenty-eight patients with whiplash symptoms lasting an average of 15.5 months were assessed using a classification system placing them into categories of (A) symptom free, (B) mild nuisance symptoms not requiring medication or interfering with activities of daily living, (C) intrusive symptoms causing frequent use of analgesics and interfering with activities of daily living,

or (D) severely disabling symptoms causing lost employment, repeated medical treatment and continual use of analgesics.

At the time of referral 27 of the 28 patients had category C or D symptoms. Chiropractic treatment was carried out and the patients reassessed by two blinded examiners. Following treatment, 26 of the 28 patients had improved (93%). Sixteen had improved by one symptom category and 10 by two symptom categories.

Although a small study, these findings are compelling given the generally poor overall outcome of standard medical interventions with patients suffering WADs.

### CONCLUSION

Whiplash Associated Disorder is a common affliction in the United States with up to 43% of patients suffering with long-term symptoms. Most treatments used in dealing with this ubiquitous problem have not been shown to be effective by rigorously controlled scientific studies. The one possible exception to this rule is chiropractic manipulation. Randomized prospective studies have demonstrated success in reducing neck pain and increasing range of motion.

Finally, because chiropractic manipulation has been shown to be clinically effective(1-15), cost-effective(11,12, 14-16), and safe(8,9,18), with high levels of patient satisfaction(10,13,17-19), it seems logical that a clinical trial of chiropractic treatment should perhaps be the standard of care for patients with conditions known to be responsive to such interventions.

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