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# NEWS AND NOTES

January 2010

## Active Intervention in Patients with Whiplash Associated Disorders Improves Long Term Prognosis



Whiplash-associated disorders (WAD) remain one of the most troublesome consequences related to the use of the world's roadways and accounts for a large proportion of medical disabilities. Frequent clinical manifestations of WAD are neck pain, headache, shoulder pain, cognitive disturbances, and other psychological symptoms. A recent study assessing the long-term effects of WAD resulting from motor vehicle accidents has proven that 55% of the victims had residual symptoms 17 years later. For patients with WAD, there is some evidence for greater short-term effectiveness when active intervention is undertaken rather than a standard intervention of initial rest, recommended use of a soft collar, and gradual selfmobilization. Despite these studies, standard intervention is often rec-

ommended to patients (Rosenfeld, Seferiadis, Carlsson, & Gunnarsson, 2003, p. 2491).

In 2003 Rosenfeld and colleagues performed a randomized controlled clinical trial to measure the effectiveness of an active intervention compared to a standard intervention for those who recently suffered WAD.

The study participants were 97 subjects who sought medical advice following a recent WAD. The subjects were randomized to one of four interventions groups. Group 1 received active intervention within 96 hours of injury. Group 2 received standard intervention within 96 hours of injury. Group 3 received active intervention delayed 14 days from injury. Group 4 received standard intervention delayed 14 days from injury.

The subjects were assessed at 6 months and 3 years post injury. The outcomes measures were pain intensity using a visual analog scale, cervical range of motion (ROM) measurement, and the amount of sick leave required due to the WAD.

The active intervention consisted of an active exercise protocol incorporating the idea of early and

repeated movement and consisted of 2 phases. Phase 1 was given to all patients and included information on postural control, and cervical rotation exercises that were to be performed 10 times every 1 hour as far as pain permits. This phase was meant to encourage safe and frequent home exercising and appropriate pain coping behavior. Phase 2 was initiated at 20 days post injury if symptoms persisted, and consisted of a standard dynamic mechanical assessment as outlined by McKenzie. The evaluation was administered by a physical therapist that has been formally trained in McKenzie's method of Mechanical Diagnosis and Therapy (MDT). The MDT system classifies spinal-related disorders based on the mechanical (such as ROM) and symptomatic (such as pain) responses to repeated movements, positions, and activities derived from the history and assessment.

Treatment is predicated on these responses and emphasizes self-care. The program consists of

movements such as cervical retraction, extension, flexion, rotation, or lateral flexion, depending on which were proven to be beneficial and safe during the assessment. The active intervention group received treatment and advice for an average of 4 visits over a 6 week period.

The standard intervention consisted of written information on the injury mechanism, advice on suitable activities, and postural advice. The advice was to rest the neck during the first weeks after trauma and that a soft cervical collar could provide comfort as well as prevent the neck from excessive movement. The patients were instructed to perform active movements of the neck and shoulders 2-3 times daily starting a few weeks after trauma.

In addition to the 4 treatment groups, a fifth group was solicited at the 3 year follow up to act as a control group of asymptomatic unexposed individuals of similar age and gender to the study population. Cervical ROM measurements were obtained from the control group for comparison to the study groups.

**The main finding in this study was that active intervention in patients with WAD resulted in a significantly greater reduction in pain intensity, a greater chance to retain or regain ROM, and reduced sick leave compared with a standard intervention. The main clinical implication is that patients with acute WAD should be instructed in self mobilization as soon as possible. The emphasis should be on frequently repeated cervical rotation. If symptoms persist more than 20 days after trauma, patients should be referred to a health professional educated in mechanical diagnosis and therapy according to the McKenzie system.**

Rosenfeld, M., Seferiadis, A., Carlsson, J., & Gunnarsson, R. (2003). Active intervention in patients with whiplash associated disorders improves long term prognosis: A Randomized controlled clinical trial. *Spine*, 28 (22), 2491-2498.

