Whiplash: More than Standard Neck Pain

By Amanda Donohue

"WHIPLASH, A SOFT TISSUE INJURY TO THE NECK, is also called neck sprain or neck strain. It is characterized by a collection of symptoms that occur following damage to the neck, usually because of sudden extension and flexion," according to the National Institutes of Health.1

Approximately two-thirds of people involved in motor vehicle accidents develop symptoms of whiplash. The symptoms usually do not develop until two to 48 hours after the injury. Whiplash can also occur from falls, sports injuries, work injuries and other incidents.

Patients with whiplash injury may complain of pain and stiffness in the neck, extending into the shoulders and arms, upper back and even the upper chest. Two-thirds of patients suffer with headaches, especially at the base of the skull. Patients may also experience dizziness, difficulty swallowing, nausea and even blurred vision after injury, but these symptoms tend to resolve quickly.

According to Marshall, 45 percent to 85 percent of people who suffer a whiplash injury have the symptoms five years after the accident, and 82 percent had a straightening or reversal of their cervical curvature.2 "Many authors regard a straightening or reversal of the normally lordotic curvature to be one of the most significant changes of a whiplash injury." 3

"The initial injury is due to damage of cervical muscles, ligaments, disks, blood vessels and nerves. The actual injury to soft tissues happens so rapidly that normal protective muscle reflexes cannot respond in time to decrease or prevent the injury," according to a 2006 case report in the *Journal of the American Chiropractic Association.*3

The Diagnosis

To diagnose whiplash, a DC must first take a thorough history of the injury and the patient's previous medical history. Pre-existing conditions, such as arthritis, may increase the severity of the whiplash. The DC should give the patient an in-depth physical examination with concentration on the neuromusculoskeletal system.

Similar to asking about whiplash injuries from motor vehicle accidents, DCs should ask the patient questions that reveal the details of a sports-related incident. DCs must ask patients with vehicular accident injuries, "Where was the impact from? Were you moving at the time? Did you have a seatbelt on? What type of seatbelt? Were you braced for impact? Did you hit anything in the vehicle?" says Dr. Alan Sokoloff, team chiropractor for the Baltimore Ravens. "You have to do the same for sport-related neck injuries, too," he says.

Dr. Sokoloff explains that he "encounters doctors that say, 'I do not treat sports injuries,' but if you are treating injuries from auto accidents and really dig into the mechanism of the injury with all of its details, it's pretty much the same."

Advanced Imaging

In some cases, advanced imaging may be necessary to make a proper diagnosis. A cervical CT scan is ordered if a DC suspects cervical spine trauma, such as a vertebral fracture, if the patient complains of paresthesia of the hands, if the patient is unconscious or has severe pain together with neurological deficits, explains Jerrold Simon, DC, president of the ACA Rehab Council.

"A cervical MRI is ordered when the whiplash patient complains of neck pain with radicular symptoms, such as a tingling sensation radiating down the arms or if there is suspected cervical spine trauma and the clinical findings suggest ligamentous damage. A cervical MRI may be ordered as a follow-up to normal cervical CT scan if the above symptoms are present," says Dr. Simon.

Treatment

In treating whiplash injury, patients should be reminded to stay active, unless immobilization is necessary due to serious injury. "A cervical foam collar may be needed during the first few days following the incident if the cervical trauma is severe. However, in general, cervical collars are not recommended," says Dr. Simon.

Immediately after the whiplash injury, Dr. Simon applies an ice compress to the posterior para-cervical spine musculature for about 10 minutes on a periodic basis. Ice compresses are generally only used for the first 48 hours after an injury.4

"A nutritional intervention for pain should include d-Phenylalanine 250 mg/day, dl-Phenylalanine 750 mg/day, L-tryptophan 3 g/day, and instruct the patient to to avoid coffee and other caffeinated beverages," he says.

In addition, chiropractic care is beneficial. A retroactive study by Woodward et al. published in *Injury*demonstrated that chiropractic treatment benefited 26 of 28 patients suffering from chronic whiplash syndrome.5 Chiropractic care in this study included spinal manipulation, proprioceptive neuromuscular facilitation stretching and cryotherapy [ice-pack therapy].

A neck adjustment works to improve the mobility of the spine to increase range of motion, while also enhancing movement of the adjoining muscles. This will eventually eliminate pain, soreness and stiffness and allow a patient to painlessly turn and tilt the head. In addition to adjustments, a treatment plan of mobilization, massage or rehabilitative exercises may speed up the recovery process.

"Cervical rehabilitation procedures should be considered after the initial pain and inflammation have substantially subsided," says Dr. Simon. "Then a functional capacity evaluation with focal attention to the cervical spine should be performed to assess the magnitude and degree of upper spinal functional deficiency."

Following this test, a DC can decide if the patient should receive a treatment of isometric cervical flexion, extension and lateral flexion against resistance exercises, a proprioceptive rocker board, wobble board and/or gym ball exercises and vibration therapy.

"Every person is different, and everyone's ability to heal is different, so how we treat patients is very individualized," says Dr. Sokoloff. "We will use modalities initially, if indicated. We will use soft-tissue techniques, if indicated. We will usually use a chiropractic adjustment, if indicated. But the one procedure we always use is progressive rehabilitative exercises, in office and home recommendations."

Home recommendations include proper computer and phone ergonomics, range-of-motion exercises and icing, to name a few.

"Treatment plans that do not hold the patient responsible for helping themselves cheat everyone," says Dr. Sokoloff. "The more a patient is informed about home icing instructions, home exercise and activity of daily living modifications, the better the outcomes are for everyone."

Footnotes:

1. www.ninds.nih.gov/disorders/whiplash/whiplash.htm

2. Marshall D. Correlation of cervical lordosis measurement with incidence of motor vehicle accidents. *ACO*5.3 1996:79-85.

3. Decarlo A. Rehabilitation Approach to Treatment of Whiplash- Associated Disorder. *JACA* Aug 2006.www.acatoday. org/JacaDisplay1.cfm?CID=1826&DisType=Text

4. http://www.niams.nih.gov/Health_Info/Sports_Injuries/ default.asp

5. Woodward MN, Cook JCH, Gargan MF, Bannister GC. Chiropractic treatment of chronic whiplash injuries.*Injury* 1996;27:643-645).

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