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## **Acute Torticollis -- a New Approach to Treatment**

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### **Abstract**

A case history of a 23-year-old male with a traumatic acute spasmodic torticollis is presented. The symptoms diminished very quickly with chiropractic care with an emphasis on physical therapy and cervical spine adjustments.

### **Introduction**

Torticollis is caused by spasm of the neck muscles which causes rotation and tilting of the head.<sup>1</sup> The spasm can be quite severe, not allowing the patient to move his head to a normal posture. But in the doctors office, the spasm can be helped by physical therapy modalities.<sup>2</sup> We have found that by coupling interferential muscle stimulation with cryotherapy and range of motion exercises, followed by spinal manipulation, patients will enjoy normal motion very quickly. With continued care, the patient can resume normal activities more rapidly than without the above care.

### **Case history**

A 23-year-old Caucasian male presented at our office seven days post-injury with his chin approximating his right shoulder. He had severe pain worsened with any cervical spine motion and was unable to raise his head to a neutral position. He was the driver of a vehicle which was broadsided on the left side of his car by another vehicle. He was treated by paramedics at the scene and taken home by a friend. His symptoms worsened to the point where he presented for treatment.

### **Examination and Radiographic Findings**

Cervical spine range of motion and orthopedic testing was deferred due to the severe restriction of movement and the presenting attitude of the neck in right lateral flexion and right rotation. Deep tendon

reflexes and dynamometer readings were unremarkable. the neck pain was concentrated on the left side with radiation as far as the AC joint.

Plain film radiographs were taken with the neck as straight as the patient could bear, to rule out fracture. A severe rotational deformity was visualized on the x-ray films. Following treatment, five cervical radiographs were taken on the same day. He still had a loss of cervical lordosis, as well as aberrant motion of the midcervical spine, but he had significantly better posture than previously viewed.

### **Course of Treatment**

Treatment directed at the patient's cervical symptoms consisted of interferential muscle stimulation to the patient's cervical spine and upper thoracic spine with ice. He was seated and instructed to move his neck very slowly, as far as possible, into flexion, extension, lateral flexion, and rotation bilaterally. Following 30 minutes of this therapy, his range of motion had improved to the point that he could straighten his neck and guardedly moved it through at least 50 percent of normal range of motion. At this time five radiographs of the cervical spine were taken.

He was seen four times during the first week and was re-examined on the fourth visit. At that time his range of motion had increased to 80 percent of normal into flexion, extension, and left rotation; 90 percent into right rotation; and 70 percent in lateral flexion bilaterally. He had returned to work after the second visit. The pain had greatly diminished. The patient was treated for six weeks at which time he was asymptomatic and able to participate in all preinjury activities, including competitive basketball. He was placed on a home stretching regimen and advised to return for maintenance care. After six months he remains asymptomatic.

### **Discussion**

In a car accident where there is a deceleration injury or the patient is broadsided, the forward momentum of the free shoulder results in combined flexion and rotation toward the secured shoulder.<sup>3</sup> The result is a stiff neck caused by contraction of neck muscles drawing the head to one side.<sup>4</sup>

We have used interferential muscle stimulation because of its ability to relax the muscle spasm and ease the pain. Also, with interferential muscle stimulation, higher doses can be obtained within the body without surface discomfort and there is less risk of a burn.<sup>5</sup> The biologically most effective stimulation is created within the body, in the depth of the tissue, with a higher intensity than under the electrodes.<sup>6</sup> In an acute patient such as this, the settings we normally use are 80-150Hz and 80-100Hz in order to stimulate the

muscle without irritating it, with a slower pulsing 0-10 or 0-15 Hz current. The ice is used to help decrease swelling and to promote analgesia. With the neck muscles being stimulated and cooled, we have noticed a quick increase in motion as the patient actively moves his head through the normal ranges of motion, stopping when the pain increases. This allows us to specifically adjust the patient following therapy. We have found this approach to work on several patients with acute torticollis, as well as most patients with whiplash injuries.

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